

News Report

NATIONAL ACADEMY OF SCIENCES • NATIONAL RESEARCH COUNCIL • NATIONAL ACADEMY OF ENGINEERING

1972 News Report Index

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News Report records the major activities of the National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council. It is published monthly except for combined June-July and August-September issues.

This index is intended insofar as possible to provide a digest of the contents of the 1972 issues of *News Report*. Because the publication is devoted in large measure to discussion of reports issued by committees and panels of these organizations, principal entries generally are listed by title of report discussed (not by title of

News Report article), alphabetically. Names of persons, organizations, and agencies also are listed alphabetically. Subject headings and cross-references are included for topics of particularly wide interest (e.g., energy, environment, transportation).

The 1973 index will be issued shortly after the end of the year. Copies of the 1970 and 1971 indexes are available from the *News Report* office. The *News Report Index* is compiled by Helen Gay Mackintosh.

Abatement of Nitrogen Oxides Emissions from Stationary Sources, NRC panel report, following a request to the National Academy of Engineering from U.S. Environmental Protection Agency, assesses control technology for nitric oxide and nitrogen dioxide (NO and NO₂, often considered together as NO_x); since electric-utility boilers are the largest stationary source, NO_x control involves questions of fuel choice, combustion technology, and energy economics: panel advises EPA to coordinate its abatement-technology research plan with national energy policies for optimum use of resources, with major emphasis on combustion modification to reduce NO_x formation in coal-, oil-, and gas-fired industrial and utility boilers. Report also recommends Federal attention and support to new energy-conversion concepts for developing "clean" fuels more amenable to combustion control, as well as evaluation of all new electricity-generation techniques—Apr, 1

Ackermann, William C., of Illinois State Water Survey, elected to three-year term on NAE Council at 1972 annual meeting—Jun-Jul, 10; participated in 1968 NRC symposium on marine environment modifications; quoted from newly issued volume of papers, *Beneficial Modifications of the Marine Environment*, on water-diversion proposals that may be of benefit to the Great Lakes region—Aug-Sep, 3

Advanced Research Projects Agency of the U.S. Department of Defense, supported study on *The Science Committee* by the Committee on the Utilization of Young Scientists and Engineers in Advisory Services to Government, NRC's Office of Scientific Personnel—May, 1

African honey bee: NRC study culminating in *Final Report of the Committee on the African Honey Bee* confirms widening concern that the Brazilian bee's spread poses threats to public health and to agriculture, and recommends measures to halt further spread of this variant strain—Oct, 1

Agriculture, U.S. Department of: NRC Committee on Veterinary Medical Research and Education report on *New Horizons in Veterinary Medicine* recommends expansion of USDA extramural research grant programs and of foreign animal diseases research program—Mar, 2; upon urging by the President's Science Advisory Committee in 1969, the Department of Agriculture requested that the National Research Council evaluate the impact of the Brazilian honey bee's spread and recommend research to deal with it—Oct, 1 (see *Final Report of the Committee on the African Honey Bee*); on recommendation of the committee's interim report, USDA is seeking statutory authority to extend the U.S. prohibition against importation of adult bees to all life stages—Oct, 4; at the request of USDA, the NRC Committee on Research Advisory to the U.S. Department of Agriculture assessed the state of U.S. agricultural research programs and recommended increased involvement with the basic sciences—Nov, 6 (see *agricultural research*)

Agricultural Board of the National Research Council: workshop report on *The Quality of Rural Living* urges attention to problems of housing, health care, and education—Jan, 1; Committee on Tropical Soils reports on research needs in *Soils of the Humid Tropics*—Jun-Jul, 2

agricultural research: NRC Committee on Research Advisory to the U.S. Department of Agriculture has assessed the state of U.S. agricultural research programs and recommended changing USDA administrative and research directions to increase involvement with the basic sciences (biological, physical, social): "agricultural research cannot be restricted to empirical comparisons of methods to increase productivity" at the expense of vital basic research in such areas as biochemistry, photosynthesis, nitrogen fixation, macromolecules, human nutrition; report urges steps by USDA

and State Agriculture Experiment Station systems to strengthen ties to the broader scientific community and to increase appropriations for grants to include support of basic research—Nov, 6

Air Pollution Control Office of the U.S. Environmental Protection Agency, received panel study on *Fluorides* from the NRC Committee on Biologic Effects of Atmospheric Pollutants—Jan, 10

Alaska Earthquake, Committee on, National Research Council Division of Earth Sciences: panel report, *The Great Alaska Earthquake of 1964: Biology*, evaluates ecological changes—Feb, 1; panel report, *The Great Alaska Earthquake of 1964: Seismology and Geodesy*, recommends measures to improve understanding of earthquake hazard and to improve warning systems for earthquakes and tsunamis—Aug-Sep, 3; latest of the study series amassed at White House request reports on *The Great Alaska Earthquake of 1964: Oceanography and Coastal Engineering*—Nov, 2

Albert, A. Adrian, NAS member, died June 6, 1972—Jun-Jul, 3

Altman, Manfred, director of University of Pennsylvania's National Center for Energy Management and Power, chairman of advisory panel convened by the Board of Science and Technology for International Development, NAS Office of the Foreign Secretary, to report on *Solar Energy in Developing Countries: Perspectives and Prospects*—Apr, 5

Ames, Bruce Nathan, of University of California at Berkeley, elected to National Academy of Sciences—May, 6

Andreoli, Kathleen G., of University of Alabama, elected to NAS Institute of Medicine—Oct, 6
Apis mellifera adansonii—see African honey bee
Arid Lands Agriculture: U.S. and Soviet academies of science have agreed to sponsor further planning of a Symposium on Arid Lands Agriculture in coordination with the U.S.-Soviet Joint Commission on Scientific and Technical

Cooperation and Joint Commission on Protection of the Environment—Dec, 1

Arrow, Kenneth J., Harvard University economist, chaired NAS advisory committee on the formation of the International Institute of Applied Systems Analysis, chartered Oct. 4, 1972, by 12 founding institutions—Nov, 2

Astronomy and Astrophysics for the 1970's, NAS Astronomy Survey Committee summary report assessing the state of the field urges a national policy of matching resources to needs to maintain the rate of progress established in the 1960's, implying continued growth of support amounting to about 5½ per cent a year; report concludes that a well-balanced effort is essential—containing ground-based optical and radio telescopes and auxiliaries, a well-planned space astronomy program, adequate computational facilities for theoretical astrophysics, increased funding of modest research grants as well as of larger programs—Jun-Jul, 1; Federal funding is urged for 11 high-priority "new initiatives" in such areas as developing a very large radio array, optical telescopes and auxiliaries, infrared astronomy, x-ray and gamma-ray astronomy from orbiting observatories: list of recommendations is followed by a 10-year new program cost estimate totaling \$844 M—Jun-Jul, 7

Astronomy Survey Committee, created by National Academy of Sciences three years ago at request of Federal agencies and NAS Committee on Science and Public Policy for analysis of the state of the field and of priorities for new instruments and programs, issued its assessment in a summary report, *Astronomy and Astrophysics for the 1970's*, to be followed by publication of panel reports—Jun-Jul, 1; Physics Survey Committee concurs with its recommendations for provision of very large radio-telescope arrays and the High-Energy Astronomical Observatory (HEAO) as critical "high-leverage situations" warranting high priority support in report *Physics in Perspective*—Aug-Sep, 7

Atmospheric Pollutants, NRC Committee on Biologic Effects of, panel report on *Fluorides* transmitted to U.S. Environmental Protection Agency, Air Pollution Control Office—Jan, 10

Atomic and Molecular Physics, NRC committee report, calls for increased Federal support to maintain current research activity and urges the National Science Foundation to establish methods of ensuring program continuity and coordinating research with other agencies—Jan, 1

awards, National Academy of Engineering: 7th NAE Founders Medal to Edwin H. Land; first Vladimir K. Zworykin Award for *Electronic Engineering* to Ivan E. Sutherland—Jun-Jul, 10

awards, National Academy of Sciences: *Public Welfare Medal* to Leonard Carmichael; *James Craig Watson Medal* to André Deprit; *Alexander Agassiz Medal* to Seiya Uyeda; *Charles Doolittle Walcott Medal* to Elso S. Barghoorn; *U.S. Steel Foundation Award in Molecular Biology* to Howard M. Temin; *NAS Award in Microbiology* to Charles Yanofsky; *Henryk Arctowski Medal* to Francis S. Johnson; *George P. Merrill Award* to Roman A. Schmitt; *Arthur L. Day Prize and Lectureship* to Hatten S. Yoder, Jr.; *NAS Award in Applied Mathematics and Numerical Analysis* to Kurt O. Friedrichs; *Frederick*

Gardner Cottrell Award to Arie Jan Haagen-Smit—May, 7

Ayres, Robert U., quoted on new urban transportation systems from Highway Research Board's report, *New Transportation Systems and Concepts*—Mar, 6

Babb, Albert Leslie, of University of Washington, Seattle, elected to National Academy of Engineering—Jun-Jul, 10

Bain, Edgar Collins, NAS member, died November 27, 1971—Jan, 3

Background Information on Lactose and Milk Intolerance, statement of the NRC Food and Nutrition Board prepared by its Committee on International Food Programs, urges that programs for improving milk supplies or encouraging consumption should not, on the basis of present evidence, be discouraged in either the United States or foreign countries because of the fear of milk intolerance—Aug-Sep, 1

Baker, Michael, associate project director for two-year study by NRC Computer Science and Engineering Board culminating in report *Databanks in a Free Society: Computers, Record-Keeping and Privacy*—Dec, 1

Baker, William O., of Bell Telephone Laboratories, NAS Council term ended—May 8;

elected to NAS Institute of Medicine—Oct, 6
Bardeen, John, of University of Illinois, Urbana, elected to National Academy of Engineering—Jun-Jul, 10

Barghoorn, Elso Sterrenberg, of Harvard University, received NAS *Charles Doolittle Walcott Medal*—May, 7

Barschall, Henry Herman, of University of Wisconsin, elected to National Academy of Sciences—May, 6

Beadle, George W., former president of University of Chicago, NAS Council term ended—May, 8

Bearn, Alexander Gordon, of Cornell University Medical College, elected to National Academy of Sciences—May, 6

Beedle, Lynn Simpson, of Lehigh University, elected to National Academy of Engineering—Jun-Jul, 10

bees: *Final Report of the Committee on the African Honey Bee*, NRC study confirms widening concern that the variant strain of bees spreading outward from Brazil poses threats to public health and to agriculture—Oct, 1

Behrman, Richard E., of Columbia University College of Physicians and Surgeons and Babies Hospital of New York City, chairs NRC committee examining the practice of phototherapy for infants—May, 2

Békésy, Georg von, NAS member, died June 13, 1972—Jun-Jul, 3

Bell, Ronald Percy, of University of Stirling, Scotland, elected NAS foreign associate—May, 7

Benacerraf, Baruj, of Harvard Medical School, elected to National Academy of Sciences—May, 6

Beneficial Modifications of the Marine Environment, newly issued volume of papers—based on 1968 symposium sponsored by the National Research Council, National Academy of Sciences, National Academy of Engineering,

and U.S. Department of the Interior, and reviewed in light of subsequent developments—explores scientific and technical issues raised by modification proposals; article includes quotations from symposium participants on such proposals as influencing climate by destroying Arctic ice (Fletcher), exploiting water in the air by condensation (Landsberg), manipulating estuaries (Cronin), and diverting water to benefit the Great Lakes (Ackermann)—Aug-Sep, 2 (refer to individual names)

Berson, Solomon Aaron, formerly of Mt. Sinai School of Medicine, honored by posthumous election to National Academy of Sciences—May, 7

Biological Effects of Atomic Radiation, NAS-NRC Committee on ("BEAR committee"), predecessor of the Committee on Biological Effects of Ionizing Radiations; the present Radiation Protection Guide for the general population was based on genetic considerations conforming to BEAR committee recommendations of 170 mrem/yr, which the BEIR committee now considers unnecessarily high—Dec, 2

Biological Effects of Ionizing Radiations, NAS-NRC Committee on, reviewed the state of science against which the adequacy of Federal radiation guides may be weighed in the "BEIR report," *The Effects on Populations of Exposure to Low Levels of Ionizing Radiation*—Dec, 2

Bloom, William, professor emeritus of University of Chicago, NAS member, died May 11, 1972—Nov, 6

Booker, Henry G., of University of California at San Diego, chairman of NRC Committee on the Department of Transportation Climatic Assessment Program considering needs for research to assess potential climatic effects of man's activities in the stratosphere—Oct, 2

Branscomb, Lewis M., of International Business Machines Corp., elected to NAS Council—May, 8

Brazilian honey bee: widening spread of this variant strain of bees imported from Africa poses threats to public health and to agriculture; National Research Council recommends quarantine and control in *Final Report of the Committee on the African Honey Bee*—Oct, 1

Brinkhous, Kenneth Merle, of University of North Carolina, elected to National Academy of Sciences—May, 6

Britten, Roy John, of Carnegie Institution of Washington, elected to National Academy of Sciences—May, 6

Bromley, D. Allan, of Yale University, chaired NAS Physics Survey Committee completing two-year study of U.S. physics and its relation to society, to be published under the general title *Physics in Perspective*—Aug-Sep, 1 (quoted on page 4)

Brown, Gordon S., of Massachusetts Institute of Technology, ended term on NAE Council—Jun-Jul, 10

Brown, Harrison, U.S. National Academy of Sciences Foreign Secretary, chairman of UNESCO-ICSU study committee, presided over international conference supporting science data exchange program UNISIST—Jan, 2; appointed NAS representative to the governing Council of the new International Institute of Applied Systems Analysis—Nov, 2
Brown, Roger William, of Harvard University,

- elected to National Academy of Sciences—May, 6
- Bronk, Detlev W., NAS president from 1950 to 1962, chairman of Committee on the Utilization of Young Scientists and Engineers in Advisory Services to Government, NRC's Office of Scientific Personnel, reporting on *The Science Committee*—May, 1
- Bryant, Thomas E., president of Drug Abuse Council, Inc., Washington, D.C., elected to NAS Institute of Medicine—Oct, 6
- Bulger, Roger J., formerly chief of the Division of Allied Health Sciences and professor of community health and internal medicine at Duke University, took office as executive officer of the NAS Institute of Medicine January 1, 1972—Feb, 1
- Burke, William T., of University of Washington Law School, chairman of NRC Ocean Affairs Board's Committee on International Marine Science Affairs Policy—Mar, 4
- Burkholder, Paul Rufus, NAS member, died August 11, 1972—Oct, 3
- Busse, Ewald W., of Duke University Medical Center, elected to NAS Institute of Medicine—Oct, 6
- Caldwell, Lynton K., chairman of panel advising U.S. State Department on *Institutional Arrangements for International Environmental Cooperation*, NAS Committee for International Environmental Programs—Jan, 6
- California State Board of Education, controversy over giving parallel treatment to the theory of evolution and to special creation in public school science textbooks led to NAS resolution at 1972 annual meeting urging "segregation of the teaching and understanding of science and religion nationwide"—Nov, 1
- Callahan, Daniel, director of Institute of Society, Ethics and Life Sciences, Hastings-on-Hudson, N.Y., elected to NAS Institute of Medicine—Oct, 6
- Carmichael, Leonard, of National Geographic Society, received NAS *Public Welfare Medal*—May, 7
- Carpenter, Richard A., chief of Congressional Research Service's Environmental Policy Division since 1969, appointed executive director of NAS-NAE Environmental Studies Board—Jun-Jul, 12
- Cartan, Henri, of Institut Henri-Poincaré, France, elected NAS foreign associate—May, 7
- Chapman, Carleton B., of Dartmouth School of Medicine, elected to NAS Institute of Medicine—Oct, 6
- Chemistry and Chemical Technology, NRC Division of, committee undertakes study on the feasibility of a U.S. chemistry computation laboratory which might serve as a national resource for solving problems in chemistry and related disciplines that can be approached by theoretical methods; supported by the National Science Foundation, the study will assess the scientific objectives of such a laboratory, the types of computational systems and facilities needed, and problems of administration in developing its recommendations—Mar, 1
- Chenea, Paul F., of Research Laboratories, General Motors Corp., elected to three-year term on NAE Council at 1972 annual meeting—Jun-Jul, 10
- Child Development, Office of, the U.S. Department of Health, Education, and Welfare agency primarily responsible for the Community Coordinated Child Care ("4-C") program, requested NRC study culminating in *Report of the Panel on the Assessment of the Community Coordinated Child Care Program*—Dec, 2
- Chilton, Thomas H., retired technical director of E.I. du Pont de Nemours & Co., Inc., NAE member, died September 14, 1972—Nov, 6
- Chodorow, Marvin, chairman of NAS Advisory Committee on the U.S.S.R. and Eastern Europe, represented the Academy at Moscow in negotiating interacademy exchange program with Soviet Academy of Sciences—Apr, 1
- Chomsky, Avram Noam, of Massachusetts Institute of Technology, elected to National Academy of Sciences—May, 6
- Christman, Luther, dean of Rush College of Nursing and Allied Health, elected to NAS Institute of Medicine—Oct, 6
- Clarke, Hans Thatcher, NAS member, died October 21, 1972—Dec, 6
- Climatic Assessment Program, NRC Committee on the Department of Transportation, has been established to advise the DOT and other Federal agencies on research needs for assessing potential climatic effects of technological interventions (such as the SST and other high-altitude aircraft) in the stratosphere—Oct, 2
- Cloud, Preston, of University of California at Santa Barbara, elected to NAS Council—May, 8; chaired *ad hoc* committee of the NRC's National Materials Advisory Board reporting on *Elements of a National Materials Policy*—Nov, 4
- Cobbs, Price M., of University of California, San Francisco, elected to NAS Institute of Medicine—Oct, 6
- Cohen, Leon W., retired from NRC staff after eight years as part-time executive secretary of Division of Mathematical Sciences (succeeded by Thomas R. Kramer)—Jun-Jul, 12
- Cohen, Morris, of Massachusetts Institute of Technology, elected to National Academy of Engineering—Jun-Jul, 10
- Cohen, Wilbur J., of University of Michigan, elected to NAS Institute of Medicine—Oct, 6
- Cole, Leon M., of University of Texas at Austin, chairman of NRC Highway Research Board's Committee on New Transportation Systems and Technology, quoted from report, *New Transportation Systems and Concepts*—Mar, 6
- Coleman, James Samuel, of Johns Hopkins University, elected to National Academy of Sciences—May, 6
- Colowick, Sidney Paul, of Vanderbilt University, elected to National Academy of Sciences—May, 6
- Community Coordinated Child Care ("4-C"), a program of the U.S. Department of Health, Education, and Welfare Office of Child Development with the goal of eliminating duplication and maximizing resource use in the interest of improving and expanding child-care services; NRC study *Report of the Panel on the Assessment of the Community Coordinated Child Care Program* found weaknesses that impeded effective coordination and recommends better Federal-local planning—Dec, 2
- Computer Science and Engineering Board, National Research Council: panel reports on library and information-system applications, *Libraries and Information Technology: A National System Challenge*—Feb, 2; Board conducted two-year study of organizations shifting to computer technology for record-keeping, culminating in report *Databanks in a Free Society: Computers, Record-Keeping and Privacy*—Dec, 1 (tables on "Policy on Disclosures of Information" and "The Need for More Administrative Safeguards"—Dec, 4)
- Conference Board of Associated Research Councils—composed of National Research Council, American Council of Learned Societies, American Council on Education, and Social Science Research Council—established new National Board on Graduate Education to examine problems of graduate education in the United States—Mar, 2
- Cool, Rodney Lee, of Rockefeller University, elected to National Academy of Sciences—May, 6
- Cooper, John A. D., president of Association of American Medical Colleges, elected to NAS Institute of Medicine—Oct, 6
- coronary heart disease: NRC's Food and Nutrition Board and the American Medical Association's Council on Foods and Nutrition have issued a joint statement, *Diet and Coronary Heart Disease*, calling for steps to cut identified risks (such as plasma cholesterol levels over 220 mg/100 ml) of dietary contribution to coronary heart disease—Oct, 1
- Cottrell, Alan, government deputy chief scientific advisor, England, elected NAS foreign associate—May, 7
- Council on Library Resources, Inc., requested panel of the NRC's Computer Science and Engineering Board to examine the state of and trends in computer technology related to libraries and information systems, culminating in report *Libraries and Information Technology: A National System Challenge*—Feb, 2
- Courant, Richard, NAS member, died January 27, 1972—Feb, 3
- Cox, Doak C., of University of Hawaii, chaired oceanography panel of the NRC's Committee on the Alaska Earthquake; quoted on the problem of credibility of tsunami warnings in his introduction to report, *The Great Alaska Earthquake of 1964: Oceanography and Coastal Engineering*—Nov, 3
- Crews, Albert Victor, of University of Chicago, elected to National Academy of Sciences—May, 6
- Cristol, Stanley Jerome, of University of Colorado, elected to National Academy of Sciences—May, 6
- Critical and Strategic Materials, Committee on Technical Aspects of, NRC National Materials Advisory Board, *ad hoc* panel is undertaking study—at request of U.S. Office of Emergency Preparedness—to assess the technological potential of catalysts other than platinum for use in auto exhaust control and in oil refining and military applications—Aug-Sep, 2
- Cronin, L. Eugene, of University of Maryland, participated in 1968 NRC symposium on marine environment modifications; quoted from newly issued volume of papers, *Beneficial Modifications of the Marine Environment*, on proposals for large-scale manipulation of estuaries and tributary waters—Aug-Sep, 3
- Crow, John H., quoted on changed nesting grounds of the dusky Canada goose, from NRC

committee report *The Great Alaska Earthquake of 1964: Biology*—Feb, 7

Cullum, A. Earl, Jr., heads NAE nominating committee to submit a single nominee to succeed resigning NAE president Clarence H. Linder prior to annual meeting in May 1973—Dec, 1

Daddario, Emilio, of Gulf and Western Precision Engineering Company, elected to NAS Institute of Medicine—Oct, 6

Dahl, Robert Alan, of Yale University, elected to National Academy of Sciences—May, 6

Daniels, Farrington, NAS member, died June 23, 1972—Oct, 3

Darby, William Jefferson, of Vanderbilt University School of Medicine, elected to National Academy of Sciences—May, 6

Databanks in a Free Society: Computers, Record-Keeping and Privacy, NRC's Computer Science and Engineering Board report following two-year study of various organizations shifting to computers for record-keeping finds little increase in threats to privacy and civil liberties; while the increased feasibility of data-sharing is an important effect of advances in computer technology, the issues are "all matters of policy choice, not technological determinism": report emphasizes the problem of social control over record systems, directing its recommendations to issues of organizational behavior so that appropriate safeguards for the individual's rights may be embedded in every major record system in the nation—Dec, 1, 4-5 (includes tables from the computer-privacy survey)

David, Edward E., Jr., Presidential Science Adviser, requested establishment of new National Committee on Tunneling Technology by National Academy of Sciences and National Academy of Engineering as part of NRC Division of Earth Sciences—May, 1

David, Henry, executive secretary of the NRC's Division of Behavioral Sciences since 1966, appointed U.S. alternate delegate to the 1972 General Conference of the United Nations Educational, Scientific, and Cultural Organization—Nov, 3

Davis, W. Kenneth, of Bechtel Corp., elected to three-year term on NAE Council at 1972 annual meeting—Jun-Jul, 10

"Death with Dignity," conference planned by NAS Institute of Medicine for early 1973 will consider problems posed by medical prolongation of life—Apr, 1

deaths (of NAE and NAS members and foreign associates): A. A. Albert, on June 6, 1972; E. C. Bain, on November 27, 1971; G. von Békésy, on June 13, 1972; W. Bloom, on May 11, 1972; P. R. Burkholder, on August 11, 1972; T. H. Chilton, on September 14, 1972; H. T. Clarke, on October 21, 1972; R. Courant, on January 27, 1972; F. Daniels, on June 23, 1972; E. Fauré-Fremiet, on November 6, 1971; L. M. Gilbreth, on January 2, 1972; A. Katzir-Katchalsky, on May 30, 1972; E. C. Kendall, on May 4, 1972; S. Lefschetz, on October 5, 1972; D. S. Lehrman, on August 30, 1972; C. C. Little, on December 22, 1971; R. H. MacArthur, on November 1, 1972; C. M. MacLeod, on February 12, 1972; M. G. Mayer,

on February 20, 1972; L. A. Maynard, on June 22, 1972; E. C. Mentzer, on December 23, 1971; C. V. Moore, on August 13, 1972; J. A. Morton, on December 11, 1971; W. T. Pecora, on July 19, 1972; H. Shapley, on October 20, 1972; I. I. Sikorsky, on October 26, 1972; J. H. Steward, on February 6, 1972; S. P. Timoshenko, on May 29, 1972; R. B. Turner, on December 22, 1971—see entry under individual names for issue reported

Defense Research and Engineering, Office of the Director of, U.S. Department of Defense: requested study by *ad hoc* committee of the NRC's National Materials Advisory Board on *Testing for Prediction of Material Performance in Components and Structures*—May, 2; requested that a committee of the NRC's National Materials Advisory Board examine the state of solid-state electronics technology in relation to Defense Department present and prospective needs and possible civilian applications—Oct, 5 (see report titles, Materials and Processes for Electron Devices and Yield of Electronic Materials and Devices)

Densen, Paul M., director of Harvard Center for Community Health and Medical Care, elected to NAS Institute of Medicine—Oct, 6

Deprit, André, of Goddard Space Flight Center, received NAS James Craig Watson Medal—May, 7

Diet and Coronary Heart Disease, joint statement by the NRC's Food and Nutrition Board and the American Medical Association's Council on Foods and Nutrition calls for steps to cut identified risks (such as high plasma cholesterol) of dietary contribution to coronary heart disease; "evidence now available is sufficient to discourage further temporizing with this major national health problem"—Oct, 1

Doctorate Recipients from United States Universities, Summary Report 1971: NRC's Office of Scientific Personnel annual survey of earned research doctorates suggests little decline in postdoctoral study or employment openings for Fiscal 1971 new PhD's, indicating a postdoctoral-opportunity stability that was uncharacteristic of the surrounding U.S. economic slowdown for that period—May, 5

Dole, Vincent Paul, of Rockefeller University, elected to National Academy of Sciences—May, 6

Drake, Frank Donald, of Cornell University, elected to National Academy of Sciences—May, 6

Drosdoff, Matthew, of Cornell University, chaired NRC Agricultural Board's Committee on Tropical Soils reporting on *Soils of the Humid Tropics*—Jun-Jul, 2

Drug Abuse Prevention, Special Action Office for, asked scientists to report difficulties in obtaining for research substances controlled by Schedule I of the Comprehensive Drug Abuse Prevention and Control Act of 1970 in order to aid the Task Force for Research in its assessment of existing procedures—Mar, 2

Duffin, Richard James, of Carnegie-Mellon University, elected to National Academy of Sciences—May, 6

Dummett, Clifton, of University of Southern California School of Dentistry, elected to NAS Institute of Medicine—Oct, 6

Duwey, Pol Edgard, of California Institute of Technology, elected to National Academy of Sciences—May, 6

Eagle, Harry, of Albert Einstein College of Medicine, elected to NAS Council—May, 8

Earth Sciences, NRC Division of, new National Committee of Tunneling Technology established by NAE and NAS at request of Presidential Science Adviser Edward E. David, Jr.—May, 1

earthquakes: NRC Committee on the Alaska Earthquake, panel reports on *The Great Alaska Earthquake of 1964: Biology*—Feb, 1; Joint Panel on Problems Concerning Seismology and Rock Mechanics (NRC Committee on Seismology and U.S. National Committee for Rock Mechanics) reports on *Earthquakes Related to Reservoir Filling*—Apr, 2; NRC panel reports on *The Great Alaska Earthquake: Seismology and Geodesy*—Aug-Sep, 3; NRC panel reports on *The Great Alaska Earthquake of 1964: Oceanography and Coastal Engineering*—Nov, 2

Earthquakes Related to Reservoir Filling, NRC Committee on Seismology and U.S. National Committee for Rock Mechanics, Joint Panel on Problems Concerning Seismology and Rock Mechanics report attempts to evaluate scientific evidence behind the association and calls for additional studies to weigh what constitutes "acceptable risk": needed is improved understanding of the relationship between earthquakes and the impoundment of large reservoirs—of whether there is a cause-and-effect relation in some cases, of the triggering mechanism if there is such a relation, and of what might be done to control such earthquakes. Since possible mechanisms—increased pore-pressure, crustal loading, or both—seem to require pre-existing faults, report recommends geological mapping of the entire reservoir area as part of dam planning, with comprehensive geodetic and seismic studies before and after filling, to evaluate the degree of hazard—Apr, 2

education: the Conference Board of Associated Research Councils has established the National Board on Graduate Education to examine problems of graduate education in the United States—Mar, 2; in response to California controversy over giving parallel treatment to the theory of evolution and to special creation, the National Academy of Sciences resolved at its 1972 annual meeting to urge limiting public school textbooks to the treatment of scientific matter—Nov, 1; Panel on the Benefits of Higher Education, NRC Board of Human Resources, is conducting a "cost-benefit" analysis of post-secondary education; project director Lewis C. Solmon reports on "Prerequisites for Study of Costs and Benefits of Higher Education"—Dec, 6-7; *Final Report of the Committee on Basic Research in Education* (a joint committee of the National Research Council and National Academy of Education) recommends continuing U.S. Office of Education support for education-related basic research—Dec, 7

Education, U.S. Office of: *Final Report of the Committee on Basic Research in Education* (a joint committee of the National Research Council and National Academy of Education) recommends that the Office of Education support education-related research in various academic disciplines while continuing grants programs and research workshops—Dec, 7

The Effects on Populations of Exposure to Low

Levels of Ionizing Radiation, NAS-NRC Committee on the Biological Effects of Ionizing Radiations, the "BEIR report," transmitted to the Radiation Office of the Environmental Protection Agency, reviews the state of science against which Federal radiation guides may be weighed; report concludes that the present Radiation Protection Guide of 170 mrem/yr is unnecessarily high and urges re-evaluation on the basis of risk estimates and cost-benefit analyses which compare the activity involving radiation with the alternative options—Dec, 2

Eggers, Alfred John, Jr., of National Science Foundation, elected to National Academy of Engineering—Jun-Jul, 10

elections, Institute of Medicine of the National Academy of Sciences: 51 new members were elected this year, increasing IOM membership to 153 active and 5 senior members—Oct, 6

elections, National Academy of Engineering: 11 new members were elected in recognition of "important contributions to engineering theory and practice"; newly elected to the NAE Council are W. C. Ackermann, P. F. Chenea, A. K. Davis, W. D. Lewis—Jun-Jul, 10

elections, National Academy of Sciences: election of 75 new members (and one honored by posthumous election) was announced at 1972 annual meeting—May, 6-7; 12 scientists were named NAS foreign associates—May, 7; E. R. Piore was re-elected treasurer; L. M. Branscomb, P. Cloud, H. Eagle, and F. H. Westheimer were named to the NAS Council—May, 8

electronics: at request of U.S. Office of the Director of Defense Research and Engineering, a committee of the NRC's National Materials Advisory Board has examined current solid-state electronics technology and delivered reports on *Materials and Processes for Electron Devices* and on *Yield of Electronic Materials and Devices*—Oct, 5; NRC panel report, *Solar Cells: Outlook for Improved Efficiency*, advises U.S. National Aeronautics and Space Administration on improving energy-conversion efficiency of solar cells for powering spacecraft—Jun-Jul, 12

Elements of a National Materials Policy, NRC's National Materials Advisory Board, *ad hoc* committee report concludes that effective national or international materials policy must deal with issues of population, economic equity, and habits of consumption to sustain continuing flow of needed materials without unacceptable environmental, social, political, or fiscal costs; report recommends appropriate governmental incentives and controls, research, and public information forums for broader understanding of alternatives in materials and environmental management, long-term national reserves of critical materials for conservation purposes, and a permanent Minerals Advisory Council to evaluate national and international reserves, demands, agreements, and policies—Nov, 1, 4-5

Eliel, Ernest Ludvig, of University of Notre Dame, elected to National Academy of Sciences—May, 6

Ellis, Effie O., of American Medical Association, elected to NAS Institute of Medicine—Oct, 6

Emergency Medical Services, NRC Committee on, report on *Roles and Resources of Federal Agencies in Support of Comprehensive Emergency Medical Services* urges White House ac-

tion to make U.S. Department of Health, Education, and Welfare responsible for coordinating Federal programs and goals—Oct, 7

Emergency Preparedness, U.S. Office of, requested NRC study to assess the technological potential of catalysts other than platinum for use in auto exhaust control and in oil refining; study is being conducted by *ad hoc* panel of the NRC National Materials Advisory Board in cooperation with the NRC Committee on Motor Vehicle Emissions—Aug-Sep, 2

energy: NAE Committee on Power Plant Siting reports on issues of site selection for commercial power plants in *Engineering for Resolution of the Energy-Environment Dilemma: A Summary*—Jan, 2; NAS Office of the Foreign Secretary, Board of Science and Technology for International Development advisory panel report, *Solar Energy in Developing Countries: Perspectives and Prospects*, recommends to U.S. Agency for International Development consideration of the concept of regional energy research and development centers to study all energy sources—Apr, 5; NRC's National Materials Advisory Board report, *Elements of a National Materials Policy*, urges broader understanding of alternatives in resource and environmental management and in habits of consumption—Nov, 1

Engineering for Resolution of the Energy-Environment Dilemma: A Summary, report summarizes NAE Committee on Power Plant Siting study of issues in site selection to match technological alternatives to environmental and economic requirements; report recommends expanded research and development programs to increase options for energy supply consistent with environmental protection, research into modeling and other site-planning techniques to include consolidating State political procedures, expansion of the power industry's processes of public information; the committee urges a conservative approach that would regard irreversible environmental damage as unacceptable—Jan, 2

Enthoven, Alain, president of Litton Medical Products, Calif., elected to NAS Institute of Medicine—Oct, 6

environment: U.S. Department of State requested report, *Institutional Arrangements for International Environmental Cooperation*, from the joint NAS-NAE Environmental Studies Board, Committee on International Environmental Programs, to examine implications of the first United Nations Conference on the Human Environment—Jan, 1; NAE Committee on Power Plant Siting reports on issues of site selection for commercial power plants in *Engineering for Resolution of the Energy-Environment Dilemma: A Summary*—Jan, 2; at request of the Environmental Protection Agency, the NRC Committee on Biologic Effects of Atmospheric Pollutants prepared a panel report on *Fluorides*—Jan, 10; *Semiannual Report by the Committee on Motor Vehicle Emissions* (National Research Council) to EPA considers technological feasibility of reducing auto air-pollutant emissions—Feb, 4; NRC Ocean Affairs Board committee report, *Marine Environmental Quality*, recommends research priorities to combat pollution—Feb, 8; NRC panel report, *Abatement of Nitrogen Oxides Emissions from Stationary Sources*, assesses control technology at request of EPA—Apr, 1;

a study group under the Committee on International Environmental Programs of the joint NAS-NAE Environmental Studies Board is examining environmental issues bearing on formation of a U.S. policy for materials at request of U.S. National Commission on Materials Policy—Jun-Jul, 1; newly issued volume of papers based on a 1968 NRC symposium explores scientific and technical issues in regard to *Beneficial Modifications of the Marine Environment*—Aug-Sep, 2; NRC Committee on the Department of Transportation Climatic Assessment Program has been established to consider research needs for assessing potential climatic effects of man's activities in the stratosphere—Oct, 2; *Summary Report of the Ad Hoc Panel on (NO_x) and the Ozone Layer* explores research implications suggested by scientific papers on high altitude aircraft exhaust emissions affecting the earth's atmospheric ozone layer—Oct, 2; NRC Highway Research Board's Advisory Committee on Highways and Air Quality is studying relationships between highway planning and control of air pollution to advise Federal agencies on meeting Federal Highway Act and National Environmental Policy Act requirements—Oct, 3; Committee on International Environmental Programs study group is assessing specific implications of materials policies of other countries and of international conventions, at request of U.S. National Commission on Materials Policy—Nov, 1; NAS-NRC "BEIR committee" reports on *The Effects on Populations of Exposure to Low Levels of Ionizing Radiation* at request of EPA Radiation Office—Dec, 2

Environmental Protection Agency, U.S.: Air Pollution Control Office received panel report on *Fluorides* from NRC Committee on Biologic Effects of Atmospheric Pollutants—Jan, 10; *Semiannual Report by the Committee on Motor Vehicle Emissions*, NRC interim report to EPA, considers technological feasibility of meeting statutory emission standards set for automobiles by Clean Air Act amendments of 1970—Feb, 4; EPA requested National Academy of Engineering to assess current control technology, near-term prospects, and research targets in *Abatement of Nitrogen Oxides Emissions from Stationary Sources* (NRC panel report)—Apr, 1; Radiation Office received "BEIR report" *The Effects on Populations of Exposure to Low Levels of Ionizing Radiation* (NAS-NRC Committee on the Biological Effects of Ionizing Radiations) reviewing the state of science against which the adequacy of Federal radiation guides may be weighed—Dec, 2

Environmental Studies Board of the National Academy of Sciences and National Academy of Engineering: Richard Carpenter appointed executive director, succeeding Alexander Zucker—Jun-Jul, 12; for Board committee reports and current studies, see International Environmental Programs, Committee on

Estes, E. Harvey, of Duke University School of Medicine, elected to NAS Institute of Medicine—Oct, 6

Eugster, Hans Peter, of Johns Hopkins University, elected to National Academy of Sciences—May, 6

Euler, Ulf Svante von, of Karolinska Institute, Sweden, elected NAS foreign associate—May, 7

Evans, Harold J., of Oregon State University,

elected to National Academy of Sciences—May, 6

- F**auré-Fremiet, Emmanuel, NAS foreign associate, died November 6, 1971—Jan, 3
- Fawcett, Don Wayne, of Harvard Medical School, elected to National Academy of Sciences—May, 6
- Federal Agency Evaluation Research, NRC Committee on, panel has been established upon request of the U.S. Department of Health, Education, and Welfare to consider the Government's strategies for evaluating prospective welfare reforms—Aug-Sep, 1
- Festinger, Leon, of New School for Social Research, elected to National Academy of Sciences—May, 6
- Field, George Brooks, of University of California at Berkeley, elected to National Academy of Sciences—May, 6
- Final Report of the Committee on the African Honey Bee*, NRC study confirms widening concern that spread of the Brazilian bee (a variant of *Apis mellifera adansonii*) poses threats to public health and to agriculture, and reaffirms an interim recommendation to halt the spread with "emphasis . . . upon improvement of strains rather than upon eradication of the bee"; report proposes simultaneous strategies including rigid quarantine, research on the bee's response to climate, genetic and behavioral studies, and special breeding programs. "Control by genetic barriers may offer the best means for stopping northward migration of undesirable Brazilian bees"—Oct, 1, 4-5
- Final Report of the Committee on Basic Research in Education*, NRC Division of Behavioral Sciences, recommends that the U.S. Office of Education support education-related research in a variety of disciplines, in addition to other programs "for carrying the results of basic research through development into application"; the committee called for continued support of major basic-research grants, the small-grants program it initiated, and research institutes and workshops—Dec, 7
- Fink, Daniel J., of General Electric Co. Space Division, appointed to NAE Space Applications Board organizing committee—Jun-Jul, 2
- Finland, Maxwell, of Harvard Medical School, elected to National Academy of Sciences—May, 6
- Fletcher, Joseph O., now head of the National Science Foundation's Office of Polar Programs, participated in 1968 NRC symposium on marine environment modifications; quotations from newly issued volume of papers, *Beneficial Modifications of the Marine Environment*, urge quantitative understanding of the planetary heat budget—Aug-Sep, 2
- Fluorides*, NRC Committee on Biologic Effects of Atmospheric Pollutants, panel reports that appraisal of effects of airborne fluorides reveals no direct hazard to man, except in industrial exposure, but warns that plant damage occurs at much lower levels of exposure; increasing industrial fluoride emissions may thus indirectly influence human health, becoming a serious hazard for the future of man and his environment—Jan, 10
- Food and Nutrition Board, National Research

Council: issued statement prepared by its Committee on International Nutrition Programs, *Background Information on Lactose and Milk Intolerance*, concluding that current evidence does not warrant discouragement of normal milk consumption—Aug-Sep, 1; issued joint statement with the American Medical Association's Council on Foods and Nutrition, *Diet and Coronary Heart Disease*—Oct, 1

Foster, Henry, of John Andrew Hospital, Alabama, elected to NAS Institute of Medicine—Oct, 6

Freedom of Choice in Housing: Opportunities and Constraints, NRC social-science panel and NAS-NAE Advisory Committee to HUD, report assesses research in "social mixing" in terms of implications for effective government strategy to provide equal housing opportunities for Americans: since "simultaneous efforts to achieve racial and economic mixing may work at cross purposes," initial emphasis of a policy of social diversity in housing should be on "opening options for racial mixing of those with corresponding economic capabilities"—based on enforcement of the law to attain one truly open housing market, coupled with positive assistance to minority home buyers, efforts to assure equal access to real estate listings and rentals, encouragement of large developments with open-housing practices, and continued efforts to revitalize inner cities through equitable distribution of housing opportunities. The report urges HUD to pursue a multiple strategy that includes support for high priority experimental and research programs "to determine the conditions under which residential mixing of families or individuals of different racial and economic categories may be most feasible"—Feb, 2-3

- Freidson, Eliot, of New York University, elected to NAS Institute of Medicine—Oct, 6
- Friedman, Herbert, chairman of Ad Hoc Panel on (NO_x), and the Ozone Layer, of the NRC Geophysics Research Board, issuing *Summary Report*—Oct, 2-3
- Friedrichs, Kurt Otto, of New York University, received *National Academy of Sciences Award in Applied Mathematics and Numerical Analysis*—May, 7

Gall, Joseph Grafton, of Yale University, elected to National Academy of Sciences—May, 6

Garrison, William L., University of Pittsburgh Professor of Environmental Engineering, chairman of Advisory Committee on Highways and Air Quality established as a committee of the NRC's Highway Research Board to study relationships between road planning and air pollution control—Oct, 3

Gerbner, George, of University of Pennsylvania's Annenberg School of Communications, appointed to NAE Space Applications Board organizing committee—Jun-Jul, 2

Gibbon, John Heysham, Jr., of Jefferson Medical College, elected to National Academy of Sciences—May, 6

Gilbreth, Lillian Moller, NAE member, died January 2, 1972—Feb, 3

Ginzberg, Eli, of Columbia University Graduate School of Business, elected to NAS Institute of Medicine—Oct, 6

Ginzton, E. L., of Varian Associates, chairman of NRC Committee on Motor Vehicle Emissions—Feb, 4 (quoted—Feb, 5)

- Global Atmospheric Research Program, multi-lateral scientific venture quoted by NAS President Philip Handler as an example of successful U.S.-U.S.S.R. cooperation in his article "The Moscow Agreements and U.S.-Soviet Scientific Relationships"—Aug-Sep, 10
- Goland, Martin, of Southwest Research Institute, ended term on NAE Council—Jun-Jul, 10
- Goldmark, Peter Carl, of CBS Laboratories, elected to National Academy of Sciences—May, 6
- Goldreich, Peter Martin, of California Institute of Technology, elected to National Academy of Sciences—May, 6
- Gomory, Ralph Edward, of T. J. Watson Research Center, IBM, elected to National Academy of Sciences—May, 6
- Graduate Education, National Board on, established by Conference Board of Associated Research Councils to examine problems of graduate education in the U.S.—Mar, 2
- The Great Alaska Earthquake of 1964: Biology*, NRC Committee on the Alaska Earthquake, Panel on Biology reports on attempts to evaluate far-reaching effects of the earthquake's extensive land displacement on ecological interrelationships: significant effects noted include restricted nesting grounds of the dusky Canada goose, altered spawning and migrational habits of the pink salmon, changes in communities of intertidal invertebrates along Prince William Sound; panel recommends an inventory of "living resources," with more extensive ecological studies of representative aquatic and terrestrial natural environments, and coordination of state and Federal studies necessary to understand our changing environment and provide the basis for research after a natural disaster—Feb, 1
- The Great Alaska Earthquake of 1964: Oceanography and Coastal Engineering*, NRC Committee on the Alaska Earthquake, latest report in the study series documents experience of the earthquake and resulting tsunami as a basis for better understanding in the future, and considers problems of setting safety standards for port protection, of credibility of tsunami warnings, of limitations of ordinary tide gages as tsunami recorders, and of prediction and control; report emphasizes the need "for much better understanding of the characteristics of tsunamis in mid-ocean"—Nov, 2-3
- The Great Alaska Earthquake of 1964: Seismology and Geodesy*, NRC Committee on the Alaska Earthquake panel report notes that the focal mechanism for the great earthquake of March 27, 1964, is not completely understood; report recommends measures to improve understanding of earthquake hazard and to improve warning systems for earthquakes and tsunamis; quoted from report are recommendations for more research on physical mechanisms involved in elastic-strain energy in the earth, for support to improve the World-Wide Network of Standard Seismographs, for recordings of ground motions at the structural-damage level, and for precise surveys of earthquake-prone areas to determine actual surface deformation—Aug-Sep, 3
- Great Lakes: the U.S.-Canadian International Field Year for the Great Lakes began intensive

study of Lake Ontario April 1, 1972, as part of the International Hydrological Decade—Feb, 10
 Greenberg, Bernard, dean of University of North Carolina's School of Public Health, elected to NAS Institute of Medicine—Oct, 6
 Greenstein, Jesse L., of California Institute of Technology, chaired NAS Astronomy Survey Committee reporting on *Astronomy and Astrophysics for the 1970's*—Jun-Jul, 1
 Gustafson, Richard L., quoted on user preferences in modes of urban transportation from NRC Highway Research Board report, *New Transportation Systems and Concepts*—Mar, 6
 Gvishiani, Dzherman M., deputy chief of the U.S.S.R. State Council for Science and Technology, represented the Soviet Union in planning the International Institute of Applied Systems Analysis by agreement among the academies of science or similar societies of twelve nations—Aug-Sep, 10; elected to three-year term as chairman of the governing Council of the new International Institute of Applied Systems Analysis—Nov, 2

Haagen-Smit, Arie Jan, of California Institute of Technology, received NAS *Frederick Gardner Cottrell Award*—May, 7

Haggerty, Robert J., of University of Rochester School of Medicine and Dentistry, elected to NAS Institute of Medicine—Oct, 6

Hahn, Erwin Louis, of University of California at Berkeley, elected to National Academy of Sciences—May, 6

Halpern, Charles R., of Center for Law and Social Policy, Washington, D.C., elected to NAS Institute of Medicine—Oct, 6

Hamilton, William F., II, quoted on achieving balance without excluding significant innovation in urban transportation, from NRC Highway Research Board's report, *New Transportation Systems and Concepts*—Mar, 6

Handler, Philip, NAS President, quoted on purpose of restructuring the National Research Council: reorganization represents "a significant reorientation of our advisory programs"—Jun-Jul, 8; article on scientific relationships between the United States and the Soviet Union discusses opportunities for implementing the "Moscow Agreements," adapted from Dr. Handler's June 14, 1972, testimony before the House Science and Astronautics Committee's Subcommittee on International Cooperation in Science and Space—Aug-Sep, 8-11; Handler signed protocol with Soviet Academy President Keldysh summarizing fall talks where it was agreed to strengthen and extend interacademy scientific cooperation—Dec, 1

Harlan, Jack Rodney, of University of Illinois, elected to National Academy of Sciences—May, 6

Harrington, Donald, of Foundation for Medical Care of San Joaquin County, Calif., elected to NAS Institute of Medicine—Oct, 6

Harris, LaDonna, president of Americans for Indian Opportunity, McLean, Va., elected to NAS Institute of Medicine—Oct, 6

Harry, George W., Jr., chairman of Panel on Biology, NRC Committee on the Alaska Earthquake—Feb, 6

Haughton, James, of Health and Hospitals Governing Commission of Cook County, Chicago,

elected to NAS Institute of Medicine—Oct, 6
 Haven, Stoner B., of Simon Fraser University, quoted on changed post-earthquake communities of intertidal invertebrates, from NRC committee report, *The Great Alaska Earthquake of 1964: Biology*—Feb, 7

Hawley, Amos H., University of North Carolina sociologist, chaired NRC social-science panel working with NAS-NAE Advisory Committee to HUD on report, *Freedom of Choice in Housing: Opportunities and Constraints*—Feb, 2; chairman of NRC's Division of Behavioral Sciences panel studying changing characteristics of urban living at request of NAS-NAE Advisory Committee to HUD—May, 2

Hawthorne, Edward, of Howard University, elected to NAS Institute of Medicine—Oct, 6
 Hayashi, Osamu, of Kyoto University, Japan, elected NAS foreign associate—May, 7

Hayes, George J., principal deputy assistant secretary of Defense for health and environment, Washington, D.C., elected to NAS Institute of Medicine—Oct, 6

Haywood, H. Carl, director, John F. Kennedy Center for Research on Education and Human Development, Tenn., elected to NAS Institute of Medicine—Oct, 6

health: National Academy of Engineering plans two-year study with NAS and NRC to develop recommendations of subcommittee (of NAE Committee on the Interplay of Engineering with Biology and Medicine) reporting on *Sensory Aids for the Handicapped: A Plan for Effective Action*—Apr, 2; U.S. Maternal and Child Health Services is supporting a study by NRC Division of Medical Sciences to examine the practice of phototherapy, used increasingly in hospital nurseries to prevent hyperbilirubinemia among infants—May, 2; NRC Food and Nutrition Board concluded that current evidence does not warrant discouragement of normal milk consumption because of the fear of milk intolerance in its statement *Background Information on Lactose and Milk Intolerance*—Aug-Sep, 1; joint report of NRC Food and Nutrition Board and American Medical Association's Council on Foods and Nutrition, *Diet and Coronary Heart Disease*, calls for steps to reduce risks of dietary contribution to the disease—Oct, 1; NRC Committee on Emergency Medical Services report, *Roles and Resources of Federal Agencies in Support of Comprehensive Emergency Medical Services*, urges White House action to make U.S. Department of Health, Education, and Welfare responsible for coordinating Federal programs and goals—Oct, 7; NAS-NRC "BEIR committee" report, *The Effects on Populations of Exposure to Low Levels of Ionizing Radiation*, urges re-evaluation of Federal radiation guides—Dec, 2

Health, Education, and Welfare, U.S. Department of (HEW): NRC Committee on Veterinary Medical Research and Education report on *New Horizons in Veterinary Medicine* found HEW the most significant source of funds for extramural veterinary research programs—Mar, 2; HEW requested study on the costs of educating health professionals from NAS Institute of Medicine as directed by the Comprehensive Health Manpower Training Act of 1971—Apr, 1; HEW requested panel of the NRC Committee on Federal Agency Evaluation Research to advise the Government on strategies for evaluating prospective reforms in

the U.S. welfare system—Aug-Sep, 1; NRC Committee on Emergency Medical Services calls for White House action to make HEW responsible for coordinating Federal programs and goals in its report, *Roles and Resources of Federal Agencies in Support of Comprehensive Emergency Medical Services*—Oct, 7; HEW Office of Child Development requested NRC study, *Report of the Panel on the Assessment of the Community Coordinated Child Care Program*—Dec, 2

Henry, David, professor of higher education at the University of Illinois, chairman of newly established National Board on Graduate Education—Mar, 2

Hermann, Inger M., appointed executive secretary of the NAS Institute of Medicine—Feb, 1

Heroy, William B., Jr., of Southern Methodist University, appointed to NAE Space Applications Board organizing committee—Jun-Jul, 2

Hershey, Nathan, of University of Pittsburgh Graduate School of Public Health, elected to NAS Institute of Medicine—Oct, 6

Hertz, Roy, of Population Council, New York, elected to National Academy of Sciences—May, 6

Herwald, Seymour W., Westinghouse Electric Corp. vice president for engineering and development, chairman of NAE Committee on Transportation reporting on *Urban Transportation Research and Development*—Apr, 6

Heyssel, Robert, director of Office of Health Care Programs, Johns Hopkins Medical Institutions, elected to NAS Institute of Medicine—Oct, 6

Hightower, Joe W., of Rice University's Chemical Engineering Department, chairman of *ad hoc* panel of the Committee on Technical Aspects of Critical and Strategic Materials, NRC National Materials Advisory Board, examining catalysts for use in auto exhaust control and in oil refining—Aug-Sep, 2

Highway Research Board, NRC Division of Engineering: Committee on New Transportation Systems and Technology, excerpts from a group of papers on *New Transportation Systems and Concepts*—Mar, 6; Advisory Committee on Highways and Air Quality is studying relationships between highway planning and air pollution control to advise Federal agencies on meeting Federal Highway Act and National Environmental Policy Act requirements—Oct, 3

Highways and Air Quality, Advisory Committee on, established under the NRC's Highway Research Board to assess relationships between road planning and control of air pollution, and thus advise Federal agencies in preparing guidelines to meet requirements of the Federal Highway Act and the National Environmental Policy Act of 1969; report of three-day workshop held in September 1972 will be published in early 1973—Oct, 3

Hillier, James, of RCA Corp., ended term on NAE Council—Jun-Jul, 10

Hirsch, James Gerald, of Rockefeller University, elected to National Academy of Sciences—May, 6

Hittinger, William C., vice president of RCA Solid State Division, chaired a panel of the NRC's National Materials Advisory Board reporting on *Yield of Electronic Materials and Devices*—Oct, 5

Hoard, James Lynn, of Cornell University,

elected to National Academy of Sciences—May, 6

Hoffman, Roald, of Cornell University, elected to National Academy of Sciences—May, 6

Hogness, John R., President of NAS Institute of Medicine, reported on programs and plans of IOM at NAS 1972 Autumn meeting—Oct, 1

Hollister, Robinson G., Jr., of Swarthmore College, chairman of panel of the NRC Committee on Federal Agency Evaluation Research considering strategies for evaluating prospective welfare reforms—Aug-Sep, 1

Holloman, John, private practitioner, New York City, elected to NAS Institute of Medicine—Oct, 6

Homans, George Caspar, of Harvard University, elected to National Academy of Sciences—May, 6

Housing and Urban Development, U.S. Department of (HUD): NRC social-science panel and NAS-NAE Advisory Committee to HUD report on *Freedom of Choice in Housing: Opportunities and Constraints*, advising HUD to pursue the issue of "social mixing" as an aspect of U.S. housing policy—Feb, 2; NAS-NAE Advisory Committee to HUD has requested a panel of the NRC's Division of Behavioral Sciences to undertake a study of changing characteristics of urban living—May, 2 (see urban living)

Housner, George William, of California Institute of Technology, elected to National Academy of Sciences—May, 6

Howard, John M., Surgeon-in-Chief at Crozer-Chester Medical Center, chaired NRC Committee on Emergency Medical Services reporting on *Roles and Resources of Federal Agencies in Support of Comprehensive Emergency Medical Services*—Oct, 7

Howell, Francis Clark, of University of California at Berkeley, elected to National Academy of Sciences—May, 6

HUD, NAS-NAE Advisory Committee to—see Housing and Urban Development, U.S. Department of

hyperbilirubinemia: NRC committee has begun an examination of the merits of phototherapy to prevent this condition of excess bile pigment in blood serum among infants; the project is supported by U.S. Maternal and Child Health Services—May, 2 (see phototherapy)

Institute of Medicine of the National Academy of Sciences: newly appointed to IOM posts are R. J. Bulger, executive officer; K. D. Yordy, senior program officer; I. M. Hermann, executive secretary—Feb, 1; the Institute plans a study and conference on problems of education of health professionals for Oct. 2-3, and a national conference on "Death with Dignity" for early 1973—Apr, 1; IOM staff work has begun in planning a study of the costs of educating health professionals as requested by the U.S. Department of Health, Education, and Welfare—Apr, 1: IOM position in NRC reorganization plan is unique, as its purposes embrace the functions envisioned both for "Assemblies" and "Boards or Commissions"—Jun-Jul, 8; 51 new members elected this year increase IOM membership to 153 active and 5 senior members; report includes list of new members and

brief summary of studies in progress—Oct, 6

Institutional Arrangements for International Environmental Cooperation, NAS Committee for International Environmental Programs panel report makes recommendations to State Department on U.S. position regarding problems of attitude and organization to foster constructive environmental concern on both the national and international level at United Nations Conference on the Human Environment: assessment of political and environmental reality requires emergence of flexible institution networks and full coordination of national policies with those of a suggested intergovernmental advisory and research board working with a central U.N. environmental unit; report urges the United States to advocate establishment of central U.N. leadership, an independent global environmental science advisory and research board, a global monitoring system, a world fund for environmental action including research projects and aid to developing countries, and transnational or regional environmental organizations—Jan, 1

international affairs: World Science Information System dubbed UNISIST was supported by an 83-country intergovernmental conference for proposal at the 1972 General Conference of the United Nations Educational, Scientific and Cultural Organization—Jan, 2; NAS committee advised U.S. State Department on *Institutional Arrangements for International Environmental Cooperation*—Jan, 6; NRC Ocean Affairs Board report, *International Marine Science Affairs*, urges a coherent international ocean science policy—Mar, 1; at request of the U.S. Agency for International Development, an advisory panel of the Board of Science and Technology for International Development, NAS Office of the Foreign Secretary, reports on *Solar Energy in Developing Countries: Perspectives and Prospects*—Apr, 5; the new NRC Office of International Affairs (headed by the NAS Foreign Secretary) will mobilize American scientific and technical skills to assist less developed countries—Jun-Jul, 8; article on "The Moscow Agreements and U.S.-Soviet Scientific Relationships" adapted from testimony of NAS President Philip Handler before the House Subcommittee on International Cooperation in Science and Space—Aug-Sep, 8-11; International Institute of Applied Systems Analysis (chartered Oct. 4, 1972), a multi-lateral, nongovernmental, scientific institution, will use systems analysis for management of problems common to industrialized societies—Aug-Sep, 10; Nov, 2

International Affairs, Office of, a new component of the National Research Council responsible for mobilizing American scientific and technical skills to assist in the development of less industrialized nations; the NAS Foreign Secretary will be the principal officer, assisted by an Executive Committee—Jun-Jul, 8

International Cooperation in Science and Space, House Science and Astronautics Committee's Subcommittee on, testimony presented on June 14, 1972, by National Academy of Sciences President Philip Handler reviewed scientific relationships between the United States and the Soviet Union and discussed opportunities for implementing the "Moscow Agreements"—Aug-Sep, 8-11

International Council of Scientific Unions

(ICSU): joint ICSU-UNESCO committee proposal of a World Science Information System dubbed UNISIST received support of an 83-country intergovernmental conference in October 1971—Jan, 2; NAS committee report on *Institutional Arrangements for International Environmental Cooperation* supports a U.N. global monitoring system proposed by ICSU's Scientific Committee on Problems of the Environment (SCOPE)—Jan, 6; National Academy of Sciences serves as the adhering body to ICSU as well as to various individual international scientific unions; constructive experience with Soviet counterparts in many areas of science at such multinational scientific meetings may improve as result of the "Moscow Agreements," in the view of NAS President Philip Handler—Aug-Sep, 8

International Development, U.S. Agency for: requested report on *Solar Energy in Developing Countries: Perspectives and Prospects* from advisory panel convened by the Board of Science and Technology for International Development, NAS Office of the Foreign Secretary—Apr, 5; supported NRC Agricultural Board's Committee on Tropical Soils in study of research needs, *Soils of the Humid Tropics*—Jun-Jul, 2

International Environmental Programs, Committee on, of the joint NAS-NAE Environmental Studies Board: panel report on *Institutional Arrangements for International Environmental Cooperation* makes recommendations to U.S. Department of State regarding implications of the United Nations Conference on the Human Environment—Jan, 1; at request of U.S. National Commission on Materials Policy, a study group is examining environmental issues bearing on formation of a U.S. materials policy—Jun-Jul, 1; this study group is also assessing specific implications of materials policies of other countries and of international conventions—Nov, 1

International Field Year for the Great Lakes, U.S.-Canadian binational program of the 1965-1974 International Hydrological Decade, operational plans were completed for intensive study of Lake Ontario to begin April 1, 1972; six simultaneous study programs—terrestrial water budget, water movement, energy balance, lake meteorology, boundary-layer phenomena, chemical and biological studies—should produce data of use in such areas as lake management, weather forecasting, pollution control, water level regulation, and management of Great Lakes fish stocks—Feb, 10

International Hydrological Decade (IHD), U.S. National Committee for the: a committee of the National Academy of Sciences, joins with Canadian National Committee for the IHD to complete operational plans for the International Field Year for the Great Lakes beginning April 1, 1972—Feb, 10; the committee plans an interdisciplinary Symposium on Advanced Concepts and Techniques in the Study of Snow and Ice Resources to be held in November 1973: problems to be examined include natural processes, observational systems, modeling and computational techniques, and management of snow and ice resources—Jun-Jul, 1

International Institute of Applied Systems Analysis: a mechanism for international collaboration in the use of systems analysis for the management of social problems is being planned by the academies of science or de-

signed societies of 12 nations—Britain, France, West Germany, Italy, Japan, Canada, the United States, the Soviet Union, Poland, East Germany, and perhaps Bulgaria and Czechoslovakia—Aug-Sep, 10; chartered Oct. 4, 1972, by 12 founding organizations, the institute is the first multilateral, nongovernmental, scientific institution organized specifically to study large-scale problems common to industrialized nations; it will be concerned with research projects to develop new methodologies for analysis and problem-solving, cross-comparison of various countries' approaches to solution, and applied projects in such areas as environmental systems, health-care systems, municipal and industrial management systems, and large engineering design systems—Nov, 2; H. Raiffa appointed full-time director; D. M. Gvishiani elected chairman of the governing Council—Nov, 2

International Marine Science Affairs, NRC Ocean Affairs Board, Committee on International Marine Science Affairs Policy, report proposes framework for developing a coherent U.S. national and international ocean science policy; prudent use of the ocean will require international cooperation to cope with five tasks—study of ocean processes, provision of global marine science services, regulation for rational use of the ocean, facilitation of ocean research activities, and assistance to developing nations in the study and use of their ocean resources. Committee urges U.S. action to secure maximum freedom of access for scientific study of the oceans, and recommends strengthening United Nations oceanographic programs—Mar, 1, 4-5

international scientific conferences: schedule of 1972 meetings which representatives of the National Academy of Sciences or National Academy of Engineering were expected to attend (includes list of appropriate Academy staff contacts)—Feb, 10

Jaffe, Jerome H., director of Special Action Office for Drug Abuse Prevention in the Executive Office of the President, quoted concerning Task Force for Research—Mar, 2

Johnson, Francis S., of University of Texas at Dallas, chaired NAS Space Science Board panel reporting on *Outer Planets Exploration, 1972-1985*—Jan, 8; awarded *Henryk Arctowski Medal* at NAS annual meeting—May, 7; appointed to NAE Space Applications Board organizing committee—Jun-Jul, 2

Johnson, James Robert, of Physical Sciences Research Laboratory, 3M Co., elected to National Academy of Engineering—Jun-Jul, 10

Johnston, Harold, of University of California, author of paper "Reduction of Stratospheric Ozone by Nitrogen Oxide Catalysts from Supersonic Transport Exhaust" reviewed by NRC Ad Hoc Panel on (NO_x) and the Ozone Layer in its *Summary Report*—Oct, 2

Kaplan, Henry Seymour, of Stanford University School of Medicine, elected to National Academy of Sciences—May, 6; elected to NAS Institute of Medicine—Oct, 6

Kappelt, George F., chief engineer of Laboratories and Test Department of Bell Aerospace Co., chaired *ad hoc* committee of the NRC's National Materials Advisory Board reporting on *Testing for Prediction of Material Performance in Components and Structures*—May, 2

Karlin, Samuel, of Stanford University, elected to National Academy of Sciences—May, 6

Katchalsky Fellowship, senior fellowship in biophysical chemistry established by MIT Neurosciences Research Program in memory of NAS Foreign Associate Aharon Katzir-Katchalsky, killed May 30, 1972—Aug-Sep, 2

Katz, Milton, director of International Legal Studies at Harvard Law School, chairman of NRC Committee on the Life Sciences and Social Policy, addressed National Academy of Sciences at annual meeting, April 25, 1972—Jun-Jul, 4-5 (excerpts from his address, published under the title *Remarks* by Milton Katz)

Katzir-Katchalsky, Aharon, of Weizmann Institute of Science, NAS foreign associate, killed May 30, 1972; MIT Neurosciences Research Program has established Katchalsky Fellowship in his memory—Aug-Sep, 2

Keldysh, M. V., president of the Academy of Sciences of the U.S.S.R., headed fall delegation to meetings with U.S. academy where it was agreed to strengthen and extend interacademy scientific cooperation—Dec, 1

Kempe, C. Henry, of University of Colorado Medical Center, elected to NAS Institute of Medicine—Oct, 6

Kendall, Edward Calvin, NAS member, died May 4, 1972—Jun-Jul, 3

Kendrew, John Cowdery, deputy chairman, Medical Research Council Laboratory of Molecular Biology, England, elected NAS foreign associate—May, 7

Kennedy, Donald, of Stanford University, elected to National Academy of Sciences—May, 6

Keyserling, Mary, former director of Women's Bureau of U.S. Department of Labor, chaired panel of Advisory Committee on Child Development, NRC Division of Behavioral Sciences, preparing *Report of the Panel on the Assessment of the Community Coordinated Child Care Program*—Dec, 2

Koelle, George Brampton, of University of Pennsylvania School of Medicine, elected to National Academy of Sciences—May, 6

Koenigswald, Ralph von, of Senckenberg Museum, Germany, elected NAS foreign associate—May, 7

Kramer, Thomas R., assistant executive secretary of NRC Division of Engineering, appointed executive secretary of NRC Division of Mathematical Sciences—Jun-Jul, 12

Kraus, John Daniel, of Ohio State University, elected to National Academy of Engineering—Jun-Jul, 10

Krauskopf, Konrad B., chairman of NRC's Committee on the Alaska Earthquake reporting on *The Great Alaska Earthquake of 1964: Oceanography and Coastal Engineering* (latest of the study series); quoted on need for better understanding of the characteristics of tsunamis in mid-ocean—Nov, 3

Kruskal, William H., chairman of Department of Statistics of University of Chicago, former member of NRC Advisory Committee on Census Enumeration and of President's Commission on Federal Statistics, chairman of new NRC Committee on National Statistics—Feb, 1

Kunze, Karl, of Industrial Relations Division of Lockheed-California Co., chairman of NRC Advisory Committee on the Assessment of Experimental Manpower R&D Laboratories examining research aspects of U.S. Department of Labor-funded manpower programs—Nov, 1

Kuznets, Simon, of Harvard University, elected to National Academy of Sciences—May, 6

Labor, U.S. Department of, Office of Research and Development has requested NRC Advisory Committee on the Assessment of Experimental Manpower R&D Laboratories to study research aspects of department-supported programs and develop criteria for assessment—Nov, 1

Lambe, Thomas William, of Massachusetts Institute of Technology, elected to National Academy of Engineering—Jun-Jul, 10

Land, Edwin H., Polaroid Corp. president and director of research, awarded *NAE Founders Medal* at 1972 annual meeting—Jun-Jul, 10

Landau, Ralph, of Halcon International, Inc., New York, elected to National Academy of Engineering—Jun-Jul, 10

Landsberg, Helmut E., of University of Maryland, participated in 1968 NRC symposium on marine environment modifications; quoted from newly issued volume of papers, *Beneficial Modifications of the Marine Environment*, on his proposal to exploit the "water reservoir in the air"—Aug-Sep, 2

law: NRC's Computer Science and Engineering Board report, *Databanks in a Free Society: Computers, Record-Keeping and Privacy*, finds threats to individual civil liberties to be a social rather than technological problem, and recommends embedding appropriate safeguards by law in every major record system—Dec, 1

Lawrence, Henry Sherwood, of New York University School of Medicine, elected to National Academy of Sciences—May, 6

Leaf, Alexander, of Massachusetts General Hospital, elected to National Academy of Sciences—May, 6

Lefschetz, Solomon, NAS member, died October 5, 1972—Nov, 6

Lehrman, Daniel S., NAS member, died August 30, 1972—Oct, 3

Lenher, Samuel, retired executive of Du Pont Co., appointed to NAE Space Applications Board organizing committee—Jun-Jul, 2

Lewis, W. Deming, Lehigh University President, headed steering committee for NAE report, *Engineering for Resolution of the Energy-Environment Dilemma: A Summary*—Jan, 2; elected to three-year term on NAE Council at 1972 annual meeting—Jun-Jul, 10

Libraries and Information Technology: A National System Challenge, NRC Computer Science and Engineering Board panel reports that primary bar to development of national level computer-based library and information systems is no longer technological feasibility but complex institutional and organizational human problems and an inadequate economic/value system; recommendations include careful assessment of need for new information technology, and development of a comprehensive pilot system applying information technology—subject to rigorous economic analysis—to foster

nationally coherent programs for improving library function—Feb, 2
 Linder, Clarence H., NAE President, announced 11 new members elected to the Academy at 1972 NAE annual meeting—Jun-Jul, 10; a founding member of the National Academy of Engineering and president since May 1970, Linder will resign the presidency at NAE annual meeting in May 1973—Dec, 1
 Little, Clarence Cook, NAS member, died December 22, 1971—Jan, 3
 Luce, Robert Duncan, of Institute for Advanced Study, elected to National Academy of Sciences—May, 6
 Lythcott, George, of Columbia University College of Physicians and Surgeons, elected to NAS Institute of Medicine—Oct, 6

Mac Arthur, Robert H., NAS member, died November 1, 1972—Dec, 6
 Mac Lane, Saunders, of University of Chicago, NAS Council term ended—May, 8
 MacLeod, Colin M., NAS member, died February 12, 1972—Mar, 3
 Magruder, William, special consultant to President Nixon, appointed to NAE Space Applications Board organizing committee—Jun-Jul, 2
 Malkus, Willem Van Rensselaer, of Massachusetts Institute of Technology, elected to National Academy of Sciences—May, 6
 manpower laboratories: at request of U.S. Department of Labor, the NRC Advisory Committee on the Assessment of Experimental Manpower R&D Laboratories is examining the concept and research aspects of these department-supported programs: Mobilization for Youth, New York City; Colorado State University, Denver; Rehabilitation Research Foundation, Draper Correctional Center, Ala.; University of Michigan Manpower Laboratory, Mich.; Training and Technology, Oak Ridge; North Carolina Manpower Development Corp.—Nov, 1
 Marine Board, National Academy of Engineering, reports on developing a U.S. ocean-technology policy, *Toward Fulfillment of a National Ocean Commitment*—Mar, 1
 Marine Chemistry, Marine Chemistry Panel of NAS Committee on Oceanography reports on great increase in marine chemical research activity resulting from new workers, techniques, and methods of analysis; progress in determining chemical composition of seawater and chemical processes between the ocean and the atmosphere, lithosphere, and biosphere; current research emphasis on chemical changes in seawater associated with the life processes; and importance of marine chemistry as an example of the interrelationship of problems and techniques—Jan, 4
 Marine Environmental Quality, NRC Ocean Affairs Board, Ocean Science Committee report, recommends priorities of research and analyzes five problem areas: identification of major ocean pollutants, their sources, and input rates; processes affecting their dispersal; geochemical and biological transfer processes; effects of pollutants on organisms including man; and final deposition sites. The report urges a detailed inventory of production rates,

environmental leakage factors, and effects of all synthetic organic chemicals (with chlorinated hydrocarbons and polychlorinated biphenyls of special concern)—as well as of contaminants such as petroleum, pulp mill effluents, raw sewage, heavy metals, plastics, and radionuclides—Feb, 8
 Marks, Paul A., of Columbia University Medical School, elected to NAS Institute of Medicine—Oct, 6
 materials: at request of the U.S. Office of the Director of Defense Research and Engineering, an *ad hoc* committee of the NRC's National Materials Advisory Board reports on *Testing for Prediction of Material Performance in Components and Structures*—May, 2; at request of the U.S. National Commission on Materials Policy, a study group of the NAS-NAE Environmental Studies Board is examining environmental issues bearing on formation of a U.S. policy for materials—Jun-Jul, 1; NRC National Materials Advisory Board panel, of the Committee on Technical Aspects of Critical and Strategic Materials, is studying substitute catalyst materials for platinum, used in oil refining and auto exhaust control—Aug-Sep, 2; at request of U.S. Department of Defense, a committee of the NRC National Materials Advisory Board has examined the state of electronics technology and reported on *Materials and Processes for Electron Devices* and on *Yield of Electronic Materials and Devices*—Oct, 5; the U.S. National Commission on Materials Policy requested assessment of implications of materials policies of other countries and international conventions by a study group of the Committee on International Environmental Programs, of the joint NAS-NAE Environmental Studies Board (work in progress), and examination of issues, research needs, and possible alternatives by an *ad hoc* committee of the NRC's National Materials Advisory Board (report published, *Elements of a National Materials Policy*)—Nov, 1

Materials and Processes for Electron Devices, NRC's National Materials Advisory Board committee report examines the state of solid-state electronics technology in relation to U.S. Defense Department present and prospective needs and to possible civilian applications; recommendations for further research on candidate materials for semiconductors urge emphasis on silicon technology research—Oct, 5

Materials Policy, U.S. National Commission on: requested a study group of the joint NAS-NAE Environmental Studies Board to examine environmental issues bearing on a prospective U.S. materials policy—Jun-Jul, 1; created and directed by the National Materials Policy Act of 1970 to recommend U.S. policy for "supply, use, recovery, and disposal of materials" in order to "enhance environmental quality and conserve materials," the commission requested advice from a study group of the Committee on International Environmental Programs of the NAS-NAE Environmental Studies Board (report in progress) and from an *ad hoc* committee of the NRC's National Materials Advisory Board (report published, *Elements of a National Materials Policy*)—Nov, 1 (table of economic indicators bearing on materials policy—Nov, 5)

Maternal and Child Health Services, U.S., supports study project of NRC committee examining the practice of phototherapy, used increasingly

in hospital nurseries to prevent hyperbilirubinemia among infants—May, 2
 Mathematical Sciences, National Research Council Division of, Thomas R. Kramer appointed executive secretary, succeeding Leon W. Cohen—Jun-Jul, 12
 Mayer, Maria Goeppert, NAS member, died February 20, 1972—Mar, 3
 Maynard, Leonard A., NAS member, died June 22, 1972—Oct, 3
 McGhee, George C., former U.S. ambassador, chairman of NAS-NAE Advisory Committee to HUD assisting NRC social-science panel with general policy and research recommendations for report on *Freedom of Choice in Housing: Opportunities and Constraints*—Feb, 2
 Menninger, W. Walter, of The Menninger Foundation, Topeka, elected to NAS Institute of Medicine—Oct, 6
 Mentzer, William C., NAE member, died December 23, 1971—Feb, 3
 Merrifield, Robert Bruce, of Rockefeller University, elected to National Academy of Sciences—May, 6
 Michaelis, Anthony R., British science writer, exhibition of historic medals commemorating achievements of science from his collection presented by the NAS at 1972 annual meetings—Mar, 1
 Michener, Charles D., University of Kansas entomologist, chaired NRC Committee on the African Honey Bee; *Final Report of the Committee on the African Honey Bee* published June 1972—Oct, 1
 milk intolerance: NRC Food and Nutrition Board, Committee on International Nutrition Programs, has issued a statement, *Background Information on Lactose and Milk Intolerance*, that current evidence does not warrant discouragement of normal milk consumption in either the United States or foreign countries because of the fear of milk intolerance—Aug-Sep, 1
 Miller, Morton D., of Equitable Life Assurance Society of the United States, New York, elected to NAS Institute of Medicine—Oct, 6
 Mislow, Kurt Martin, of Princeton University, elected to National Academy of Sciences—May, 6
 Mitchell, Lawrence C., of the Office of the Foreign Secretary, represented National Academy of Sciences at Moscow in negotiating new interacademy exchange program with Soviet Academy of Sciences—Apr, 1
 Moore, Carl V., NAS member, died August 13, 1972—Oct, 3
 Morton, Jack A., former vice president of Bell Telephone Laboratories and NAE member, died December 11, 1971—Jan, 3; chaired a committee of the NRC's National Materials Advisory Board reporting on *Materials and Processes for Electron Devices*—Oct, 5
 "The Moscow Agreements and U.S.-Soviet Scientific Relationships," article adapted from testimony of NAS President Philip Handler before the House Science and Astronautics Committee's Subcommittee on International Cooperation in Science and Space, June 14, 1972, reviews the state of scientific relationships between the U.S. and the Soviet Union, and discusses meaningful "mutually beneficial" opportunities for implementing the broad protocols negotiated in Moscow; Dr. Handler urges sharp increase in exchange of scientists

with the ultimate goal of informal free flow, provisions for funding such international travel, free sharing of information in the open literature, and collaborative efforts in all areas of joint concern to further fundamental scientific knowledge as well as management of societal problems—Aug-Sep, 8-11

Motor Vehicle Emissions, National Research Council Committee on, *Semiannual Report to Environmental Protection Agency* considers technological feasibility of reducing auto air-pollutant emissions—Feb, 4; the committee is working in cooperation with an *ad hoc* panel of the Committee on Technical Aspects of Critical and Strategic Materials, NRC National Materials Advisory Board, studying the technological potential of catalysts other than platinum for use in auto exhaust control and in oil refining—Aug-Sep, 2

National Academy of Engineering: plans two-year study in cooperation with units of the NAS and NRC to develop recommendations for a national program to stimulate the provision of needed sensory aids to the blind and deaf, as outlined in subcommittee report, *Sensory Aids for the Handicapped: A Plan for Effective Action*, NAE Committee on the Interplay of Engineering with Biology and Medicine—Apr, 2; appointed organizing committee to prepare work plan for the new NAE Space Applications Board, established at request of U.S. National Aeronautics and Space Administration—Jun-Jul, 2; at 1972 annual meeting 11 engineers were honored by election to membership in the Academy; newly elected to the NAE Council were W. C. Ackermann, P. F. Chenea, W. K. Davis, and W. D. Lewis; NAE awards were presented to E. H. Land and I. E. Sutherland—Jun-Jul, 10

National Academy of Sciences and National Academy of Engineering, preview of events planned for 1972 annual meetings and symposia April 24-28—Mar, 1

National Academy of Sciences, U.S.: new agreement with the Academy of Sciences of the U.S.S.R. for 1972-73 expands interacademy scientific exchange program by 20 percent, providing for 216 man-months of visits by scientists from each nation, with joint research not subject to these limitations—April, 1; at 1972 annual meeting, the Academy approved reorganization to strengthen National Research Council administration, beginning July 1, 1972—May, 1; 76 scientists (one posthumously) were elected to NAS membership and 11 received awards at annual meeting—May, 6-7; E. R. Pioré was re-elected treasurer; L. M. Branscomb, P. Cloud, H. Eagle, F. Westheimer were named to NAS Council—May, 8; NAS resolution urges segregation of the teaching and understanding of science and religion nationwide, in response to California controversy over giving parallel treatment to the theory of evolution and to special creation in public school textbooks—Nov, 1; one of 12 founding institutions signing charter for the International Institute of Applied Systems Analysis Oct. 4, 1972, the NAS will contribute dues from the U.S. National Science Foundation—Nov, 2; a protocol sum-

marizing fall talks with the Academy of Sciences of the U.S.S.R. said the academies "agreed to continue to seek practical realization" of a variety of proposals for cooperative and exchange projects, in coordination with the U.S.-Soviet Joint Commission on Scientific and Technical Cooperation, and to sponsor further planning of a Symposium on Arid Lands Agriculture—Dec, 1

National Aeronautics and Space Administration (NASA), U.S.: requested panel of NAS Space Science Board to study new cost and engineering data for spacecraft, culminating in report, *Outer Planets Exploration, 1972-1985*—Jan, 8; requested that National Academy of Engineering establish a Space Applications Board—Jun-Jul, 2; requested study by *ad hoc* NRC panel on *Solar Cells: Outlook for Improved Efficiency*—Jun-Jul, 12

National Board on Graduate Education, established by the Conference Board of Associated Research Councils as "a means for an unbiased, thorough evaluation of graduate education today and of its relation to American society in the future"—Mar, 2

National Institutes of Health, U.S.: NRC Committee on Veterinary Medical Research and Education report on *New Horizons in Veterinary Medicine* used data from NIH Bureau of Health Professions Education and Manpower Training; committee recommends that the National Institutes of Health be given a mandate "to support veterinary medicine as an integral part of the medical sciences"—Mar, 2-3

National Materials Advisory Board, National Research Council: *ad hoc* committee reports on problems and practice of predictive testing in *Testing for Prediction of Material Performance in Components and Structures*, at request of U.S. Office of the Director of Defense Research and Engineering—May, 2; *ad hoc* panel of the Committee on Technical Aspects of Critical and Strategic Materials is studying substitute catalyst materials for platinum—Aug-Sep, 2; at request of the U.S. Office of the Director of Defense Research and Engineering a committee has examined the state of solid-state electronics technology and delivered reports on *Materials and Processes for Electron Devices* and on *Yield of Electronic Materials and Devices*—Oct, 5; *ad hoc* committee reported on *Elements of a National Materials Policy*, at request of U.S. National Commission on Materials Policy for advice on issues, research needs, and possible alternatives—Nov, 1

National Oceanic and Atmospheric Administration, U.S.: joins with Canada Centre for Inland Waters to aid in studying Lake Ontario during the International Field Year for the Great Lakes beginning April 1, 1972—Feb, 10; NRC Ocean Affairs Board committee report on *International Marine Science Affairs* recommends establishment of an interagency committee on ocean affairs under chairmanship of the NOAA administrator to help coordinate U.S. Government activities, and establishment of NOAA as the focal point for U.S. participation in international ocean programs—Mar, 5; NOAA received NRC study on effects of high-altitude aircraft exhaust emissions on the stratosphere, *Summary Report of the Ad Hoc Panel on (NO_x) and the Ozone Layer*—Oct, 2

National Research Council reorganization: at 1972 annual meeting, the National Academy

of Sciences approved NRC reorganization to begin July 1, with an expected two-year transition period; plan provides for assemblies which will consider scientific-discipline problems and act as advisors to the other part of the structure—commissions and boards on topical categories, within which study committees will operate. The NRC Governing Board will be the executive committee of the NAS Council, together with appropriate representation from the National Academy of Engineering, the Institute of Medicine, and the assemblies—May, 1; general reorganization plan will strengthen the Council as the single working arm of the Academy complex: three "Assemblies" (of Physical Sciences, Life Sciences, and Social and Behavioral Sciences) concerned with the welfare of their component disciplines and their contributions to our national life will serve as sources of manpower and ideas for the functional units—the Commissions or Boards, each a multidisciplinary body concerned with a continuing aspect of American life, under which the various committees will operate—Jun-Jul, 8

National Science Foundation, U.S.: urged by NRC Committee reporting on *Atomic and Molecular Physics* to establish effective method of supporting research in this field and coordinating with other agencies—Jan, 1; supported NRC Panel on Nuclear Data Compilation program of postdoctoral research associateship—Jan, 2; is supporting a study by the NRC Division of Chemistry and Chemical Technology on feasibility of a U.S. chemistry computation laboratory—Mar, 1; NAS Physics Survey Committee report, *Physics in Perspective*, urges NSF to help maintain the integrity and balance of the U.S. physics program through selective emphasis on appropriate segments of basic research—Aug-Sep, 5 (quotation from report); National Academy of Sciences will contribute dues from NSF towards the support of the new International Institute of Applied Systems Analysis—Nov, 2

National Statistics, NRC Committee on, appointed in January 1972 in response to recommendation of the President's Commission on Federal Statistics; charged with "providing policy guidance for the application of statistics to problems of national interest," and functioning as advisor to U.S. Office of Management and Budget, Statistical Policy Division, on improving statistical design and method in Federal programs; beginning support from NAS-NRC Program Initiation and Development Fund—Feb, 1

Neel, James V., of University of Michigan School of Medicine, elected to NAS Institute of Medicine—Oct, 6

Ne'eman, Yuval, of Tel Aviv University, Israel, elected NAS foreign associate—May, 7

Nelson, Oliver Evans, Jr., of University of Wisconsin, elected to National Academy of Sciences—May, 6

New Horizons for Veterinary Medicine, NRC Committee on Veterinary Medical Research and Education, report concludes current trends in education will be insufficient to meet U.S. economic and scientific needs for veterinary manpower in 1980; urges expansion and upgrading of educational resources with joint training of paramedical personnel, collaboration with Federal Government to improve food hygiene

and animal disease control, better delivery of services to the food animal industry, adoption of standardized veterinary nomenclature, expansion of Department of Agriculture's extramural research grant programs; recommends that National Institutes of Health be given a mandate "to support veterinary medicine as an integral part of the medical sciences"—Mar, 2-3

New Transportation Systems and Concepts, Highway Research Board of NRC Division of Engineering, Committee on New Transportation Systems and Technology, excerpts consider new technology and new concerns in urban transportation planning—Mar, 6 (see individual authors: R. U. Ayres, L. M. Cole, R. L. Gustafson, W. H. Hamilton, A. J. Sobey) Newell, Allen, of Carnegie-Mellon University, elected to National Academy of Sciences—May, 6

Newton, J. Quigg, president of The Commonwealth Fund, New York City, elected to NAS Institute of Medicine—Oct, 6

Nicolet, Marcel, director of research, Institute for Space Aeronomy, Belgium, elected NAS foreign associate—May, 7

nitrogen oxides: at request of the Environmental Protection Agency to the National Academy of Engineering, an NRC panel reported on *Abatement of Nitrogen Oxides Emissions from Stationary Sources*—Apr, 1; studies of effects of aircraft nitrogen-oxides emissions on the earth's atmospheric ozone layer (including potential climatic impact) have been recommended in *Summary Report of the Ad Hoc Panel on (NO_x) and the Ozone Layer*; need for specific studies in this area will be examined by the NRC Committee on the Department of Transportation Climatic Assessment Program—Oct, 2

(NO_x) and the Ozone Layer, Ad Hoc Panel on, NRC Geophysics Research Board, *Summary Report* reviews Harold Johnston's paper "Reduction of Stratospheric Ozone by Nitrogen Oxide Catalysts From Supersonic Transport Exhaust" and considers implications for research—Oct, 2-3

Nuclear Data Compilations, Panel on, of the NRC's Committee on Nuclear Science: established a research associateship program, supported by the U.S. National Science Foundation, to reduce serious backlog in nuclear data analysis—Jan, 2; the panel is directing an intensive program to bring nuclear-data compilations from experimental work up to date by the end of 1974; "A chains" (compilations) for mass numbers 71 and 92 have been published by Academic Press as part of the *Nuclear Data Sheets* series in cooperation with the Oak Ridge National Laboratory Nuclear Data Group—Nov, 4

Ocean Affairs Board, National Research Council: Ocean Science Committee report, *Marine Environmental Quality*, recommends research priorities to combat pollution—Feb, 8; Committee on International Marine Science Affairs Policy reports on *International Marine Science Affairs*—Mar, 1

Ocean Science Committee, NRC Ocean Affairs Board, new publication *Marine Environmental Quality* recommends priorities of research on

sources of pollutants, their pathways to the sea, and their impact on men and the marine ecosystem—Feb, 8

oceanography: NAS Committee on Oceanography panel report, *Marine Chemistry*, assesses present state of and trends in the field—Jan, 4; NRC Ocean Affairs Board committee report, *Marine Environmental Quality*, recommends priorities of research—Feb, 8; NRC Ocean Affairs Board committee report, *International Marine Science Affairs*, urges international cooperation for prudent use of the ocean—Mar, 1; NAE Marine Board report, *Toward Fulfillment of a National Ocean Commitment*, calls for a coherent U.S. ocean-technology policy—Mar, 1; newly issued volume of papers based on a 1968 NRC symposium explores scientific and technical issues in regard to *Beneficial Modifications of the Marine Environment*—Aug-Sep, 2; latest of the study series amassed at White House request by the NRC's Committee on the Alaska Earthquake reports on *The Great Alaska Earthquake of 1964: Oceanography and Coastal Engineering*—Nov, 2

Organization for Economic Cooperation and Development, recommendations of a recent tunneling conference resulted in attention to research needs, culminating in establishment of new National Committee on Tunneling Technology by National Academy of Engineering and National Academy of Sciences at request of Presidential Science Adviser Edward E. David, Jr.—May, 1

Osgood, Charles Egerton, of University of Illinois, elected to National Academy of Sciences—May, 6

Outer Planets Exploration, 1972-1985, NAS Space Science Board panel report on budget and strategy; recommendations to National Aeronautics and Space Administration include a balanced program of outer solar system exploration combining TOPS Grand Tour with more intensive study of Jupiter and Saturn, continued earth-based studies, development of seven-segment Titan or equivalent, and continued NASA support in developing advanced methods of solar and nuclear electrical propulsion; alternative options for lower budgetary levels are given—Jan, 8-9

Pake, George E., of Washington University, chaired NAS committee reporting on *Physics: Survey and Outlook* in 1966—Aug-Sep, 4

Pecora, William T., NAS member, died July 19, 1972—Oct, 3

Pellegrino, Edmund, director of Health Sciences Center, State University of New York at Stony Brook, headed NAS Institute of Medicine committee planning a national conference for Oct. 2-3 on problems of education of health professionals—Apr, 1; elected to NAS Institute of Medicine—Oct, 6

phototherapy: committee of the NRC Division of Medical Sciences, in association with the Division of Biology and Agriculture and the National Academy of Engineering, began study of the merits of phototherapy, which is increasingly used in hospital nurseries to prevent or treat hyperbilirubinemia among infants; project is supported by U.S. Maternal and Child Health Services—May, 2

Physics in Perspective, NAS Physics Survey

Committee report on two-year study (conducted under the auspices of the NAS Committee on Science and Public Policy) addresses the overall scientific, educational, and institutional structure of U.S. physics, and examines the interfaces between it and other scientific disciplines and technology—Aug-Sep, 1, 4-5 (includes histograms rating various physics sub-fields); report recommends increased support in 15 "high-leverage situations" with high growth potential for scientific productivity: macroscopic quantum phenomena, quantum optics, scattering in liquids and solids, heavy-ion interactions, higher-energy nuclear physics, the National Accelerator Laboratory, the Stanford Linear Accelerator, controlled fusion, turbulence, nonlinear optics, lasers and masers, atomic and molecular beams, biophysical acoustics, very large radiotelescope arrays, and X- and gamma-ray astronomy—Aug-Sep, 6-7 (excerpts from report)

Physics: Survey and Outlook, NAS committee report issued in 1966 after a study concentrating on pending scientific questions, issues of public funding, and needs of the field as viewed from within its own boundaries—Aug-Sep, 4

Physics Survey Committee, National Academy of Sciences, has completed two-year study of U.S. physics and its relation to society under the auspices of the NAS Committee on Science and Public Policy, with support from the Atomic Energy Commission, the Department of Defense, the National Aeronautics and Space Administration, the National Science Foundation, the American Physical Society, and the American Institute of Physics; report published under the general title *Physics in Perspective*—Aug-Sep, 1

Pigford, Robert Lamar, of University of California at Berkeley, elected to National Academy of Sciences—May, 6

Piore, Emanuel R., re-elected to four-year term as treasurer of National Academy of Sciences—May, 8

platinum: limited availability and high expense have resulted in search for substitute catalyst materials for use in auto exhaust control and in oil refining; at request of U.S. Office of Emergency Preparedness, NRC study is being conducted by an *ad hoc* panel of the Committee on Technical Aspects of Critical and Strategic Materials (NRC National Materials Advisory Board) in cooperation with the NRC Committee on Motor Vehicle Emissions—Aug-Sep, 2

Porter, Rodney R., of University of Oxford, England, elected NAS foreign associate—May, 7

postdoctoral study and job trends: returns from annual survey of earned research doctorates by the NRC's Office of Scientific Personnel, issued in *Summary Report 1971: Doctorate Recipients from United States Universities*, suggest little decline in postdoctoral study or employment openings for Fiscal 1971 new PhD's, indicating a postdoctoral-opportunity stability that was uncharacteristic of the surrounding economy for that period—May, 5

Pound, Glenn S., dean and director of the College of Agricultural and Life Sciences, University of Wisconsin, chaired NRC Committee on Research Advisory to the U.S. Department of Agriculture reporting on U.S. agricultural research and its relationships with basic science—Nov, 6

Power Plant Siting, NAE Committee on, study of issues of site selection for commercial power plants is summarized in report, *Engineering for Resolution of the Energy-Environment Dilemma: A Summary*—Jan, 2

"Prerequisites for Study of Costs and Benefits of Higher Education," essay by Lewis C. Solmon, project director for NRC Panel on the Benefits of Higher Education; Solmon comments on the range of issues to be faced in "cost-benefit" analysis for evaluating the effectiveness of educational inputs—determining those benefits to individuals that benefit or impose a cost on society as well, the evolution of these effects, the meaning of "quality" in education, and the issue of time—and warns against neglecting those effects of higher education not amenable to quantification or predicting future impact by extrapolating from the past—Dec, 6-7

Prescott, Gerald W., of University of Montana, member of NRC Committee on the Alaska Earthquake, quoted from report *The Great Alaska Earthquake of 1964: Biology*—Feb, 6

President's Commission on Federal Statistics, recommended establishment of NAS-NRC Committee on National Statistics to review Federal statistical activities and advise the Statistical Policy Division of the U.S. Office of Management and Budget—Feb, 1

Program Initiation and Development Fund of NAS-NRC, provides beginning support for new NRC Committee on National Statistics—Feb, 1

Puckett, Allen E., of Hughes Aircraft Company, chairman of organizing committee appointed by the National Academy of Engineering to prepare a work plan for Space Applications Board—Jun-Jul, 2

Quality of Rural Living, The, NRC Agricultural Board workshop report urges concerned government agencies to give remedial attention to problems of low income, substandard housing, health-care scarcity, and low quality of education in rural areas, which contain 30 percent of the U.S. population but 40 percent of its poor—Jan, 1

Radiation Protection Guide, current Federal standards for the general population of 170 mrem/yr are based on genetic considerations and conform to recommendations of the NAS-NRC Committee on the Biological Effects of Atomic Radiation, predecessor of the Committee on the Biological Effects of Ionizing Radiations which now reports this Guide to be unnecessarily high—Dec, 2 (see *The Effects on Populations of Exposure to Low Levels of Ionizing Radiation*)

Raiffa, Howard, of Harvard University, appointed full-time director of the new International Institute of Applied Systems Analysis—Nov, 2

Rakestraw, Norris, of Scripps Institution of Oceanography, chaired Marine Chemistry Panel of NAS Committee on Oceanography—Jan, 5

Ramsey, Paul, of Princeton University, elected to NAS Institute of Medicine—Oct, 6

Rappaport, Paul, of RCA Corp., chaired *ad hoc*

NRC panel reporting at the request of the National Aeronautics and Space Administration on *Solar Cells: Outlook for Improved Efficiency*—Jun-Jul, 12

Remarks by Milton Katz, director of International Legal Studies at Harvard Law School, published address given at NAS Annual Banquet, April 25, 1972; excerpts "concerning the proper function of the scientist . . . in the formulation of public policy" since "one profession's finding of fact is not necessarily another's"—Jun-Jul, 4-5

Report of the Panel on the Assessment of the Community Coordinated Child Care Program, Advisory Committee on Child Development in the NRC Division of Behavioral Sciences, at request of U.S. Department of Health, Education, and Welfare's Office of Child Development a panel studied its "4-C" program and found weaknesses impeding effective community coordination; to provide an effective delivery system and expand child-care services, the report recommends new national, state, and local steps—including improved administrative machinery and advisory policy councils at each level, and a clearinghouse within the Office of Child Development for information on funding sources and uses—Dec, 2

reservoirs: Joint Panel on Problems Concerning Seismology and Rock Mechanics, NRC Committee on Seismology and U.S. National Committee for Rock Mechanics, report on *Earthquakes Related to Reservoir Filling* attempts to evaluate scientific evidence behind the association; includes chart of reservoirs where earthquakes occurred during and after filling—Apr, 2-3

resources: at request of U.S. National Commission on Materials Policy, NAS-NAE study committee is examining environmental issues bearing on formation of a U.S. policy for materials—Jun-Jul, 1; limited availability and high expense of platinum, used in oil refining and auto exhaust control, have resulted in search for substitute catalyst materials by panel of the NRC National Materials Advisory Board—Aug-Sep, 2; NRC's National Materials Advisory Board report, *Elements of a National Materials Policy*, calls for broader understanding of issues of population, economic equity, and habits of consumption to sustain flow of needed resources—Nov, 1

Reswick, James B., of Rancho Los Amigos Hospital, Calif., elected to NAS Institute of Medicine—Oct, 6

Rice, Dorothy P. of Health Insurance Research Branch, Social Security Administration, elected to NAS Institute of Medicine—Oct, 6

Richards, R. L., of Canada's Atmospheric Environment Service, attended meeting of Canadian and U.S. scientists at the National Academy of Sciences to complete operational plans for study of Lake Ontario during International Field Year for the Great Lakes beginning April 1, 1972—Feb, 10

Robbins, Frederick Chapman, of Case Western Reserve Medical School, elected to National Academy of Sciences—May, 7

Rock Mechanics, U.S. National Committee for, joins NRC Committee on Seismology in Joint Panel on Problems Concerning Seismology and Rock Mechanics to report on *Earthquakes Related to Reservoir Filling*—Apr, 2

Roles and Resources of Federal Agencies in Sup-

port of Comprehensive Emergency Medical Services, NRC Committee on Emergency Medical Services report calls for White House action to make U.S. Department of Health, Education, and Welfare responsible for "delineation of administrative goals for a comprehensive emergency medical services system and for coordination of programs of all federal agencies to meet these goals"—Oct, 7

Rollins, Reed Clark, of Harvard University, elected to National Academy of Sciences—May, 7

Rose, Jerzy Edwin, of University of Wisconsin, elected to National Academy of Sciences—May, 7

Roseman, Saul, of Johns Hopkins University, elected to National Academy of Sciences—May, 7

Royal Society of New Zealand, invited senior scientists to apply for Captain James Cook Fellowship for research in New Zealand or the Southwest Pacific area; selection announced September 1972—Apr, 2

Ruderman, Malvin Avram, of Columbia University, elected to National Academy of Sciences—May, 7

rural living: NRC Agricultural Board workshop report on *The Quality of Rural Living* urges attention to problems of housing, health care, and education—Jan, 1

Russell, Elizabeth Shull, of Jackson Laboratory, elected to National Academy of Sciences—May, 7

Russell Sage Foundation, supported two-year project of the NRC Computer Science and Engineering Board culminating in report *Data-banks in a Free Society: Computers, Record-Keeping and Privacy*—Dec, 1

Satterfield, Charles N., of Massachusetts Institute of Technology, chairman of NRC panel reporting on *Abatement of Nitrogen Oxides Emissions from Stationary Sources* at request of U.S. Environmental Protection Agency—Apr, 1

Scharff-Goldhaber, Gertrude, of Brookhaven National Laboratory, elected to National Academy of Sciences—May, 7

Schmitt, Roman A., of Oregon State University, received NAS George P. Merrill Award—May, 7

Science and Technology for International Development, Board of, NAS Office of the Foreign Secretary, advisory panel reports on *Solar Energy in Developing Countries: Perspectives and Prospects* at request of the U.S. Agency for International Development—Apr, 5

The Science Committee, NRC Office of Scientific Personnel, Committee on the Utilization of Young Scientists and Engineers in Advisory Services to Government, report examines the advisory committee system and how it might be improved: by broadening the base of scientific advice to government, by broadening concerns to include greater recognition of social aspects of science and technology, by opening the process to more public view, and by adopting an "ethic of service" for those in advisory roles. Report recommends that "appointing agencies throw the net more widely in seeking nominees for committee service" to include more younger scientists, women, and ethnic

- minorities, and that committees be subject to critical evaluation of need for their existence—May, 1
- Scientific Personnel, National Research Council Office of: returns from annual survey of earned research doctorates, issued in *Summary Report 1971: Doctorate Recipients from United States Universities*, indicate little decline in postdoctoral study or employment openings for Fiscal 1971 (July 1, 1970 to June 30, 1971) crop of new PhD's—May, 5; Committee on the Utilization of Young Scientists and Engineers in Advisory Services to Government report, *The Science Committee*, describes how the advisory committee system might be improved and the base of scientific advice to government broadened—May, 1
- Scrimshaw, Nevin, of Massachusetts Institute of Technology, chairman of Committee on International Nutrition Programs, NRC Food and Nutrition Board, issuing statement that fear of "milk intolerance" should not discourage normal use of milk—Aug-Sep, 1
- Scripps Institution of Oceanography, operates deep-sea drilling ship *Glomar Challenger* with National Science Foundation support—Mar, 1 (photo caption)
- Seismic Sea Wave Warning System: NRC committee report on *The Great Alaska Earthquake of 1964: Oceanography and Coastal Engineering* notes improvements made in the warning system on the basis of studies of its performance in the Alaska earthquake—Nov, 2-3
- seismology: Joint Panel on Problems Concerning Seismology and Rock Mechanics, of the NRC Committee on Seismology and the U.S. National Committee for Rock Mechanics, report on *Earthquakes Related to Reservoir Filling* attempts to evaluate scientific evidence behind the association—Apr, 2; NRC Committee on the Alaska Earthquake's panel report *The Great Alaska Earthquake: Seismology and Geodesy* recommends measures to improve understanding of earthquake hazard and to improve warning systems such as the World-Wide Network of Standard Seismographs—Aug-Sep, 3
- Semiannual Report by the Committee on Motor Vehicle Emissions, National Research Council, interim report to U.S. Environmental Protection Agency concludes that the combination of production and engine technology necessary to meet statutory emission standards set by the Clean Air Act amendments for 1975 model year light-duty motor vehicles is not available at present; rates of progress make it possible that larger manufacturers may be able to comply provided the EPA accepts certain provisions for catalyst replacement and other maintenance, for averaging emissions of production vehicles, and for general availability of fuel with suitably low levels of catalyst poisons—Feb, 4
- Sensory Aids for the Handicapped: *A Plan for Effective Action*, NAE Committee on the Interplay of Engineering with Biology and Medicine, Subcommittee on Sensory Aids, report finds that little effective use has been made of modern technology to provide adequate sensory devices to some 10 million Americans handicapped in sight or hearing; at the subcommittee's recommendation, the National Academy of Engineering is planning a two-year study intended to yield plans for a national program that links research and social services to stimulate the development and delivery of needed sensory aids—Apr, 2
- Shapley, Harlow, NAS member, died October 20, 1972—Dec, 6
- Shiskin, Julius, chief of Division of Statistical Policy, U.S. Office of Management and Budget, met with new NRC Committee on National Statistics January 29, 1972, to review recommendations of President's Commission on Federal Statistics—Feb, 1
- Shoupp, William E., Westinghouse Electric Corp. Research and Development Center vice president, chairman of NAE Marine Board publishing report titled *Toward Fulfillment of a National Ocean Commitment*—Mar, 5
- Sikorsky, Igor I., NAE member, died October 26, 1972—Dec, 6
- Singer, S. Fred, chaired a 1968 NRC symposium exploring scientific and technical issues raised by marine environment modification proposals; quotations from his introduction to newly issued volume of papers, *Beneficial Modifications of the Marine Environment*, based on that symposium and reviewed in light of subsequent developments—Aug-Sep, 2-3
- Sliepcevich, Cedimir M., of University of Oklahoma, elected to National Academy of Engineering—Jun-Jul, 10
- Smith, Richard A., of University of Washington School of Public Health and Community Medicine, elected to NAS Institute of Medicine—Oct, 6
- snow and ice resources: U.S. National Committee for the International Hydrological Decade (IHD) plans an interdisciplinary Symposium on Advanced Concepts and Techniques in the Study of Snow and Ice Resources to be held in November 1973: problems to be examined include natural processes, observational systems, modeling and computational techniques, and management of snow and ice resources—Jun-Jul, 1
- Sobey, A. J., quoted on needs a successful urban transportation system must meet from NRC Highway Research Board's report, *New Transportation Systems and Concepts*—Mar, 6
- social problems: NRC Agricultural Board workshop report, *The Quality of Rural Living*, urges government attention to problems of housing, health care, and education in rural areas—Jan, 1; NRC social-science panel and NAS-NAE Advisory Committee to HUD report, *Freedom of Choice in Housing: Opportunities and Constraints*, advises U.S. Department of Housing and Urban Development to pursue the issue of "social mixing" as an aspect of U.S. housing policy—Feb, 2; NAE report, *Urban Transportation Research and Development*, urges better understanding of the interactions between transportation and the physical, social, political, and economic characteristics of urban areas—Apr, 6; at request of NAS-NAE Advisory Committee to HUD, a panel of the NRC's Division of Behavioral Sciences has begun a study of the changing characteristics of urban living—May, 2; a panel of the NRC Committee on Federal Agency Evaluation Research has been established at request of the U.S. Department of Health, Education, and Welfare to consider the Government's strategy for evaluating prospective welfare reforms—Aug-Sep, 1; International Institute of Applied Systems Analysis (chartered Oct. 4, 1972), a multilateral, nongovernmental, scientific institution, will use systems analysis for management of problems common to industrialized societies—Aug-Sep, 10; Nov, 2; NRC's Computer Science and Engineering Board report, *Databanks in a Free Society: Computers, Record-Keeping and Privacy*, finds threats to individual civil liberties to be a social rather than technological problem, and recommends embedding appropriate safeguards in every major record system in the nation—Dec, 1
- Soils of the Humid Tropics*, NRC Agricultural Board's Committee on Tropical Soils, report recommends that international agencies and developing countries expedite regional and local soil surveys and management studies for agricultural development; major objective of tropical soil research programs should be the improvement of current soil management practices within locally prevailing social and economic limits; report urges studies of the nitrogen cycle and of the use of fertilizers and liming to make most efficient use of tropical soils for agriculture—Jun-Jul, 2
- Solar Cells: Outlook for Improved Efficiency*, ad hoc NRC panel, brought together by NAS Space Science Board and Committee on Solid State Sciences, reports at request of U.S. National Aeronautics and Space Administration on improving the energy-conversion efficiency of solar cells for powering spacecraft: panel recommends development of a 20- to 22-percent-efficient silicon cell (stressing improvement of the quality of available silicon), continuing surveys of other solar-cell materials candidates, development of mass-production techniques to reduce costs, and consideration of the technical and economic feasibility of terrestrial uses of solar cells for generating power—Jun-Jul, 12
- Solar Energy in Developing Countries: Perspectives and Prospects*, NAS Office of the Foreign Secretary, Board of Science and Technology for International Development, advisory panel report finds "knowledge of energy needs in developing countries is inadequate and must be improved" without limitation of study to solar energy; recommends to U.S. Agency for International Development "consideration of the concept of regional energy research and development centers as institutions to study energy needs and the means (including solar) by which these needs might be met. The suggested international solar energy institute in North Africa, if enlarged in scope to include other energy sources . . . , could be one such regional center"—Apr, 5
- Solomon, Lewis C., economist and project director for Panel on the Benefits of Higher Education (NRC's Board on Human Resources), reports on range of issues entering into a "cost-benefit" analysis in his article for *News Report*, "Prerequisites for Study of Costs and Benefits of Higher Education"—Dec, 6-7
- Solomon, George, of TRW, Inc., appointed to NAE Space Applications Board organizing committee—Jun-Jul, 2
- Solow, Robert Merton, of Massachusetts Institute of Technology, elected to National Academy of Sciences—May, 7
- Somers, Herman M., of Princeton University, Woodrow Wilson School of Public and International Affairs, elected to NAS Institute of Medicine—Oct, 6
- space: NAS Space Science Board panel reports on budget and strategy for *Outer Planets Explora-*

- tion, 1972-1985—Jan, 8; NAS Astronomy Survey Committee assesses the state of the field in summary report, *Astronomy and Astrophysics for the 1970's*—Jun-Jul, 1; National Academy of Engineering established Space Applications Board at request of U.S. National Aeronautics and Space Administration, and has appointed an organizing committee to prepare work plan—Jun-Jul, 2; NRC panel reports to NASA on *Solar Cells: Outlook for Improved Efficiency* in powering spacecraft—Jun-Jul, 12
- Space Applications Board, established by the National Academy of Engineering at request of U.S. National Aeronautics and Space Administration to identify and analyze potential benefit of space applications to the nation and mankind; organizing committee appointed to recommend membership and prepare a work plan—Jun-Jul, 2
- Space Science Board, National Academy of Sciences: at request of U.S. National Aeronautics and Space Administration for new spacecraft cost and engineering data, a panel of the Space Science Board reported on *Outer Planets Exploration, 1972-1985*—Jan, 8; *ad hoc* NRC panel, brought together by NAS Space Science Board and Committee on Solid State Sciences, reports to NASA on *Solar Cells: Outlook for Improved Efficiency*—Jun-Jul, 12
- Spellman, Mitchell, dean of Charles R. Drew Postgraduate Medical School, elected to NAS Institute of Medicine—Oct, 6
- Spoehr, Alexander, of University of Pittsburgh, elected to National Academy of Sciences—May, 7
- Starr, Chauncey, of University of California at Los Angeles, NAE Vice President, appointed to NAE Space Applications Board organizing committee—Jun-Jul, 2
- Stead, Eugene, of Duke University Medical Center, heads NAS Institute of Medicine committee planning national conference on "Death with Dignity"—Apr, 1
- Steinbrugge, Karl V., of the Pacific Fire Rating Bureau, chairman of Joint Panel on Problems Concerning Seismology and Rock Mechanics reporting on *Earthquakes Related to Reservoir Filling*—Apr, 2
- Stever, H. Guyford, resigned from NAE Council prior to expiration of his term this year upon being named director of U.S. National Science Foundation—Jun-Jul, 10
- Steward, Julian H., NAS member, died February 6, 1972—Mar, 3
- Summary Report of the Ad Hoc Panel on (NO_x) and the Ozone Layer*, NRC Geophysics Research Board, reviews Harold Johnston's paper "Reduction of Stratospheric Ozone by Nitrogen Oxide Catalysts From Supersonic Transport Exhaust" and considers implications for research needs—Oct, 2-3
- Summary Report 1971: Doctorate Recipients from United States Universities*, returns from the annual survey of earned research doctorates by the NRC's Office of Scientific Personnel suggest little decline in postdoctoral study or employment openings for Fiscal 1971 crop of new U.S. PhD's—May, 5
- Sutherland, Ivan E., awarded the first *Vladimir K. Zworykin Award for Electronic Engineering* at 1972 NAE annual meeting—Jun-Jul, 10
- systems analysis: the International Institute of Applied Systems Analysis will operate as a mechanism for international collaboration for the management of societal problems, by agreement among the academies of science or designated societies of two nations, including the United States and the Soviet Union—Aug-Sep, 10; Nov, 2
- Szentágothai, János, of University of Budapest Medical School, Hungary, elected NAS foreign associate—May, 7
- Tanenbaum, Morris, of Western Electric Co., New York, elected to National Academy of Engineering—Jun-Jul, 10
- Tanford, Charles, of Duke University Medical School, elected to National Academy of Sciences—May, 7
- Taubman, Paul, University of Pennsylvania economist, chairman of Panel on the Benefits of Higher Education, NRC's Board of Human Resources, conducting "cost-benefit" analysis of post-secondary education—Dec, 6
- Temin, Howard M., of University of Wisconsin, received U.S. Steel Foundation Award in *Molecular Biology*—May, 7
- Terry, Luther L., former U.S. Surgeon General, chaired NRC Committee on Veterinary Medical Research and Education reporting on *New Horizons for Veterinary Medicine*—Mar, 6
- Testing for Prediction of Material Performance in Components and Structures*, *ad hoc* committee of NRC's National Materials Advisory Board, at request of U.S. Office of the Director of Defense Research and Engineering, reports on problems and practice of predictive testing to anticipate product performance. Committee calls for changes in industrial practice that will affect both military and consumer-product manufacturing in dealing with technical problems (involving testing methodology), economic problems (involving trade-offs of expense against reliability), and managerial and legal problems (involving the nature of testing in the design process and legal vulnerability for product failure). Report stresses the need for product-failure information in predictive testing prior to subsequent manufacturing; for research on predictive testing methods; and for Federal procurement agencies to include appropriate requirements for performance tests in requests for proposals—May, 2
- Teuber, Hans Lukas, of Massachusetts Institute of Technology, elected to National Academy of Sciences—May, 7
- Thomas, Lewis, of Yale University, elected to National Academy of Sciences—May, 7
- Timoshenko, Stephen Prokop, NAS member, died May 29, 1972—Jun-Jul, 3
- Tobin, James, of Yale University, elected to National Academy of Sciences—May, 7
- Tocher, Don, of U.S. National Oceanic and Atmospheric Administration, chaired panel of NRC committee reporting on *The Great Alaska Earthquake of 1964: Seismology and Geodesy*—Aug-Sep, 3
- Tornyay, Rhea de, of University of California, Los Angeles, elected to NAS Institute of Medicine—Oct, 6
- Törum, Alf, participated in NRC's Committee on the Alaska Earthquake study; quoted on safety standards for port protection from tsunamis, from report *The Great Alaska Earthquake of 1964: Oceanography and Coastal Engineering*—Nov, 2
- Tosteson, Daniel, of Duke University School of Medicine, elected to NAS Institute of Medicine—Oct, 6
- Toward Fulfillment of a National Ocean Commitment*, NAE Marine Board report urges a U.S. ocean-technology policy that coordinates governmental and nongovernmental action, resources, and tasks to encourage optimum use and conservation of the marine environment; this policy would involve such elements as U.S. commitment to being a leading ocean-oriented nation, effective government-nongovernment partnership in developing a national marine program, a national conservation policy including adequate investment to maintain and enhance coastal and ocean environmental quality, and initiation of a government program to determine potential effects of alternative national marine policies—Mar, 1, 4-5
- Townes, Charles H., of University of California at Berkeley, NAS Council term ended—May, 8
- transportation: excerpts on general problems of urban transportation planning from NRC Highway Research Board's report, *New Transportation Systems and Concepts*—Mar, 6; *Urban Transportation Research and Development*, NAE Committee on Transportation report to U.S. Department of Transportation recommends expansion of Federal urban-transportation research, development, and demonstration to provide more constructive knowledge of relationships between urban needs and transportation—Apr, 6
- "Transportation and the Prospects for Improved Efficiency," symposium on transport technology and related topics held Oct 12-13 at National Academy of Engineering's 1972 autumn meeting—Oct, 1
- Transportation, U.S. Department of: received recommendations of NAE Committee on Transportation reporting on *Urban Transportation Research and Development*—Apr, 6; requested organization of the NRC Committee on the Department of Transportation Climatic Assessment Program to recommend research priorities on effects of technology in the stratosphere—Oct, 2
- Treiman, Sam Bard, of Princeton University, elected to National Academy of Sciences—May, 7
- Tropical Soils, NRC Agricultural Board's Committee on, reports on research needs in *Soils of the Humid Tropics*—Jun-Jul, 2
- tsunamis: NRC committee report *The Great Alaska Earthquake of 1964: Oceanography and Coastal Engineering* considers problems of setting safety standards for port protection from tsunamis, of credibility of tsunami warnings, of limitations of ordinary tide gages as tsunami recorders, and of prediction and control; report points up need for "much better understanding of the characteristics of tsunamis in mid-ocean"—Nov, 2-3
- Tunneling Technology, National Committee on, NRC Division of Earth Sciences, National Academy of Engineering and National Academy of Sciences established new committee as a U.S. focal point for information on and coordination of research in tunneling technology at request of Presidential Science Adviser Edward E. David, Jr.—May, 1
- Turner, Richard Baldwin, NAS member, died December 22, 1971—Feb, 3

UNISIST, World Science Information System for the exchange of scientific and technical data, was supported by an 83-country intergovernmental conference for proposal at the 1972 General Conference of the United Nations Educational, Scientific and Cultural Organization—Jan, 2

United Nations Conference on the Human Environment: U.S. Department of State requested panel report, *Institutional Arrangements for International Environmental Cooperation*, from the NAS Committee on International Environmental Programs to examine implications of the U.N. mandate for this conference—Jan, 1

United Nations Educational, Scientific and Cultural Organization (UNESCO): World Science Information System UNISIST was recommended for proposal at the 1972 General Conference by an 83-country intergovernmental conference—Jan, 2

United Nations Intergovernmental Working Group on Monitoring or Surveillance: NAS Committee for International Environmental Programs panel report, *Institutional Arrangements for International Environmental Cooperation*, supports U.N. global monitoring system proposal—Jan, 6

urban living: NRC's Division of Behavioral Sciences panel has begun study of changing characteristics of urban living at request of NAS-NAE Advisory Committee to HUD; the panel hopes to better understand "the significance of community in the metropolitan environment" and to spell out "policy options in the area of community development and housing which may be inferred from the environment and response"—May, 2

Urban Transportation Research and Development, NAE Committee on Transportation report to the U.S. Department of Transportation recommends expansion of Federal urban-transportation research, development, and demonstration to provide more constructive knowledge of relationships between urban needs and transportation technology: since transportation policy yields considerable leverage for urban change, it should be used to serve growth and renewal by fostering opportunity for social mobility. Report urges "an enhanced program of analysis and real-world experimentation" to better understand the interactions between transportation and the physical, social, political, and economic characteristics of urban areas—Apr, 6-7

U.S.-Soviet Joint Commission on Scientific and Technical Cooperation: a protocol summarizing fall talks between the U.S. and Soviet academies of science notes desirability of increasing scientific cooperation and coordinating proposals (such as sponsoring further planning of a Symposium on Arid Lands Agriculture) appropriately with the Joint Commission on which both academies are represented—Dec, 1

U.S.-Soviet scientific relationships: NAS President Philip Handler reports on the "Moscow Agreements" from his testimony before the House Subcommittee on International Cooperation in Science and Space—Aug-Sep, 8-11 (for interacademy agreements see entries under National Academy of Sciences, U.S. and U.S.S.R. Academy of Sciences)

U.S.S.R. Academy of Sciences and U.S. National

Academy of Sciences: renewed and expanded interacademy scientific exchange program for 1972-73; agreement provides for 216 man-months of Soviet visits to U.S. and 216 man-months of American visits to U.S.S.R., with provision for joint research not subject to these limitations—April, 1; delegations headed by academy presidents Keldysh and Handler respectively agreed at fall talks to strengthen and extend interacademy cooperation—Dec, 1

Uyeda, Seiya, of University of Tokyo, received NAS Alexander Agassiz Medal—May, 7

Vagelos, Pindaros Roy, of Washington University School of Medicine, elected to National Academy of Sciences—May, 7

Veterinary Medical Research and Education, NRC Committee on, two-year study culminated in report *New Horizons for Veterinary Medicine*—Mar, 2

Vostal, Jaroslav J., of University of Rochester Medical Center, Department of Pharmacology and Toxicology, chaired panel of NRC Committee on Biologic Effects of Atmospheric Pollutants reporting on *Fluorides*—Jan, 10

Walker, Eric, past NAE president, chaired NAE Committee on Industrialized Housing which developed a one-day symposium on industrialized housing held April 27 in conjunction with the 1972 NAE annual meeting—Mar, 1; Walker served as president of the National Academy of Engineering from 1966 to May 1970, when he was succeeded by Clarence H. Linder—Dec, 1

Weed, Lawrence L., of University of Vermont, elected to NAS Institute of Medicine—Oct, 6

Weinberg, Steven, of Massachusetts Institute of Technology, elected to National Academy of Sciences—May, 7

Welfare Reform Evaluation Coordinating Committee: upon request of the U.S. Department of Health, Education, and Welfare, the NRC Committee on Federal Agency Evaluation Research has organized a panel to consider strategies for evaluating welfare reforms and thus advise the interagency Coordinating Committee—Aug-Sep, 1

Westergaard, Mogens, research associate, Carlsberg Foundation, Denmark, elected NAS foreign associate—May, 7

Westheimer, Frank H., of Harvard University, elected to NAS Council—May, 8

Westin, Alan F., Columbia University professor of public law and government, director of two-year project conducted by the NRC's Computer Science and Engineering Board culminating in report *Databanks in a Free Society: Computers, Record-Keeping and Privacy*—Dec, 1

Whinnery, John Roy, of University of California at Berkeley, elected to National Academy of Sciences—May, 7

White, Robert M., of U.S. National Oceanic and Atmospheric Administration, appointed to NAE Space Applications Board organizing committee—Jun-Jul, 2

Whitehead, George William, of Massachusetts Institute of Technology, elected to National Academy of Sciences—May, 7

Wiberg, Kenneth B., of Yale University, chairman of study-planning committee on feasibility of a new national laboratory for computation in chemistry, NRC Division of Chemistry and Chemical Technology—Mar, 1

Wigington, Ronald L., Chemical Abstracts Service director of research and development, chaired panel of the NRC Computer Science and Engineering Board reporting on *Libraries and Information Technology: A National System Challenge*—Feb, 2

Wilson, Basil W., participated in NRC's Committee on the Alaska Earthquake study; quoted on safety standards for port protection from tsunamis, from report *The Great Alaska Earthquake of 1964: Oceanography and Coastal Engineering*—Nov, 2

Wise, Harold, director of Internship and Residency Program in Social Medicine, Montefiore Hospital and Medical Center, New York City, elected to NAS Institute of Medicine—Oct, 6

Wood, William Barry, III, of California Institute of Technology, elected to National Academy of Sciences—May, 7

Yanofsky, Charles, of Stanford University, received *National Academy of Sciences Award in Microbiology*—May, 7

Yield of Electronic Materials and Devices, NRC's National Materials Advisory Board panel report deals with problems of production of usable electron devices, using silicon semiconductor technology as a basis for examining the problem of yield; report urges attention to improved specification and procurement practices, and recommends creation of a government-industry committee to coordinate work for high-reliability semiconductor-production procedures—Oct, 5

Yoder, Hatten Schuyler, Jr., of Carnegie Institution of Washington, awarded NAS *Arthur L. Day Prize and Lectureship*—May, 7

Yordy, Karl D., former associate administrator for U.S. Health Services and Mental Health Administration, appointed NAS Institute of Medicine's senior program officer—Feb, 1

Younkin, Stuart G., of Campbell Soup Co., appointed to NAE Space Applications Board organizing committee—Jun-Jul, 2

Zissis, George, of University of Michigan, appointed to NAE Space Applications Board organizing committee—Jun-Jul, 2

Zwanzig, Robert Walter, of University of Maryland, elected to National Academy of Sciences—May, 7

Zucker, Alexander, returned to Oak Ridge National Laboratory after term as executive director of NAS-NAE Environmental Studies Board (succeeded by Richard A. Carpenter)—Jun-Jul, 12

Zworykin, Vladimir K., member of National Academy of Engineering and National Academy of Sciences and RCA Corp. honorary vice president, honored by establishment of award in his name supported by RCA and first presented at 1972 NAE annual meeting to Ivan E. Sutherland—Jun-Jul, 10

